Appendix B Conceptual Alternatives Evaluation Matrix

Opportunity Corridor
Step 5 -West Section Alternates
Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)		Alternate A (E. 55th St. At-grade Intersection)		Alternate B (E. 55th St. Braided T)		Alternate C (E. 55th St. Quadrant Roadway)
Purpose and Need Issues							
Economic Development Potential	Direct/Improved access to City identified Opportunity Corridor Development Districts		● Improved site access created to/from District 1 via boulevard to Kinsman Road and improved operations along E. 55th Street ● Direct access and new frontage (Improved visibility) created for District 2 via boulevard		●Improved site access created to/from District 1 via boulevard to Kinsman Road and improved operations along E. 55th Street ● Direct access and new frontage (Improved visibility)created for District 2 via boulevard		●Improved site access created to/from District 1 via boulevard to Kinsman Road and improved operations along E. 55th Street ● Direct access and new frontage (Improved visibility) created for District 2 via boulevard
Community Benefits	Neighborhood - level benefits		● Improved traffic operations on E. 55th Street ● Addition of sidewalk and multi-purpose path along proposed boulevard ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center, the proposed Kingsbury Run Connector Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities and new connections between neighborhoods ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through street lighting, as well as traffic- and pedestrian-generated human presence ● Improved access to Interstate system		●Improved traffic operations on E. 55th Street ● Addition of sidewalk and multi-purpose path along proposed boulevard ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center, proposed Kingsbury Run Connector Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities and new connections between neighborhoods ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through street lighting, as well as traffic- and pedestrian-generated human presence ● Improved access to Interstate system		●Improved traffic operations on E. 55th Street ● Addition of sidewalk and multi-purpose path along proposed boulevard ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center, the proposed Kingsbury Run Connector Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ●Potential improvement to community cohesion through increased re-development opportunities and new connections between neighborhoods ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through street lighting, as well as traffic- and pedestrian-generated human presence ● Improved access to Interstate system
Local Access & Mobility	Access changes and improvements to Interstate system access		E. 55th Street - restricted access from I-77 to NB E. 55th; new EB access from E. 55th via Blvd.; New full access and direct access to interstate system created at Kinsman Road and E75th Street via Blvd.		E. 55th Street - no EB/WB access between E. 55th and Blvd.; New full access and direct access to interstate system created at Kinsman Road and E75th Street via Blvd.		E. 55th Street - Indirect access to/from freeways and Blvd. via quadrant roadway; New full access and direct access to interstate system created at Kinsman Road and E75th Street via Blvd.
	Impacts to existing street network		Several roadways along the existing street network including E. 57th Street, E. 59th Street, E. 61st Street, E. 64th Street, Berwick Road, Colfax Road, and E. 73rd would either need to be connected to or cul-de-saced near the boulevard. Bower Avenue, Butler Avenue, E. 66th Street and E. 68th Street would be removed		Several roadways along the existing street network including E. 64th Street, Berwick Road, Colfax Road, and E. 73rd, would either need to be connected to or cul-de-saced near the boulevard; requires the removal of E. 66th Street and E. 68th Street.		Several roadways along the existing street network including Berwick Road, Colfax Road, and E. 73rd, would either need to be connected to or cul-de-saced near the boulevard; requires removal of E. 57th Street, E. 66th Street, and E. 68th Street and partial removal of Francis Avenue and Bower Avenue.
Regional Access & Mobility	Intersection Level of Service		Substandard LOS (E) at E. 55th/I-490 intersection; LOS C for Kinsman/Boulevard		LOS C for E. 55th/Ramps; LOS C for Kinsman/Boulevard		LOS C for Quadrant/Boulevard and Quadrant/E. 55th; LOS C for Kinsman/Boulevard
Modal Options	Bus, Bicycle and Pedestrian facilities (Improved, Neutral, or Reduced)	Improved	● Addition of sidewalks and multi-purpose path connecting E. 55th to Kinsman and points east ● Potential for new local and express bus service	Improved	● Addition of sidewalks and multi-purpose path connecting E. 55th to Kinsman and points east ● Potential for new local and express bus service.	Improved	● Addition of sidewalks and multi-purpose path connecting E. 55th to Kinsman and points east ● Potential for new local and express bus service.

Opportunity Corridor
Step 5 -West Section Alternates
Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)	Alternate A (E. 55th St. At-grade Intersection)		Alternate B (E. 55th St. Braided T)		Alternate C (E. 55th St. Quadrant Roadway)	
Environmental resources							
Cultural Resources/Section 4(f)							
NRHP listed/NRHP eligible sites	Number of sites and extent of impact		None		None		None
Cleveland Landmark sites impacted	Number of sites and extent of impact		None		None		None
Parks/Recreational Facilities/Section 4(f)							
Parks/Recreational Facilities	Number of existing parks and extent of impact		None		None		None
Section 6(f)							
Section 6(f) Resource Impacts	Number of resources and extent of impact		None		None		None
Ecological							
Stream crossings	Number of stream crossing impacts		None		None		None
Quality wetland impacts	Number of wetlands impacted		None		None		None
Threatened and endangered species impacts	Yes / No		No		No		No
Hazardous materials							
High Probability Sites	Number of identified ESA Screening sites	26		28		23	
Environmental justice							
Benefits to environmental justice populations	Access; Mobility; Safety; Environmental; Visual; Economic; Community Impacts		● Improved traffic operations on E. 55th Street ● Addition of sidewalk and multi-purpose path along proposed boulevard and intersecting roadways ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system		●Improved traffic operations on E. 55th Street ● Addition of sidewalk and multi-purpose path along proposed boulevard and intersecting roadways ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities; ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art; ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system		●Improved traffic operations on E. 55th Street ● Addition of sidewalk and multi-purpose path along proposed boulevard and intersecting roadways ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art; ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system
Impacts to environmental justice populations	Traffic; Noise; Residential Relocations; Business Relocations; Community Impacts; Access; Temporary Construction Impacts		● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust) ● Loss of local street connectivity in North Broadway (Slavic Village) and Kinsman neighborhoods ● Restricted access from I-77 to NB E. 55th Street		● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust) ● Loss of local street connectivity in North Broadway (Slavic Village) and Kinsman neighborhoods ● No EB/WB access from E. 55th Street and proposed boulevard		● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust) ● Loss of local street connectivity in North Broadway (Slavic Village) and Kinsman neighborhoods ● Potential longer pedestrian routing to RTA station for North Broadway neighborhood residents

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Evaluation Criteria/Alternate	Unit of Measure (Step 5)	Alternate A (E. 55th St. At-grade Intersection)		Alternate B (E. 55th St. Braided T)		Alternate C (E. 55th St. Quadrant Roadway)	
Utility Relocation Issues							
Major Utility Concerns/Impacts (fiber optic; sub stations, etc.)	List of major utilities		NEORSD 78" interceptor, 16" sludge force main, 96" combined sewer and 30" water transmission main along E. 55th; 108" combined sewer in Kingsbury Valley; NEORSD CSO Regulators at Grand, Kinsman and E. 55th; fiber optic along E. 55th and NS Nickelplate line; 8" gas main along Kinsman; large OH electric along Bower.		NEORSD 78" interceptor, 16" sludge force main, 96" combined sewer and 30" water transmission main along E. 55th; 108" combined sewer in Kingsbury Valley; NEORSD CSO Regulators at Grand, Kinsman and E. 55th; fiber optic along E. 55th and NS Nickelplate line; 8" gas main along Kinsman; large OH electric along Bower. GCRTA E. 55th Street Substation relocation. Underpass at E. 55th Street has more likelihood of impacting existing underground utilities.		NEORSD 78" interceptor, 16" sludge force main, 96" combined sewer and 30" water transmission main along E. 55th; 108" combined sewer in Kingsbury Valley; NEORSD CSO Regulators at Grand, Kinsman and E. 55th; fiber optic along E. 55th and NS Nickelplate line; 8" gas main along Kinsman; large OH electric along Bower. Underpass at E. 55th Street has more likelihood of impacting existing underground utilities.
Right of Way							
Structure Impacts*							
Residential	Number of structures impacted(estimate of units for relocation)	32 (58)	Includes 10 structures east of Kingsbury Run and 22 within St Hyacinth neighborhood (including 5 vacant)	23 (48)	Includes 10 structures east of Kingsbury Run and 13 within St Hyacinth neighborhood (including 3 vacant)	49 (77)	Includes 10 structures east of Kingsbury Run and 39 within St Hyacinth neighborhood (including 8 vacant)
Religious Structure Impacts	Number of structures impacted/name of Church	0	None	0	None	0	None
Institutional/Civic Structure Impacts	Number/description of structures impacted	0	None	0	None	0	None
Commercial Structure Impacts	Number of structures impacted (# relocations) Description of businesses impacted	6(3)	JBI Scrap Processors; Inner City Wrecking, H&L Mfg, Three Vacant Commercial Buildings	5 (6)	JBI Scrap Processors; Quick Services/Bob's Auto Spring; Quality Stamping; Inner City Wrecking; GCRTA Substation; One Vacant Commercial Building	5 (3)	JBI Scrap Processors; Northeast video; Inner City Wrecking; Two Vacant Commercial Buildings
Freight Rail Impacts	Extent of Permanent or Temporary R/W Impacts		None		None		None
GCRTA Impacts	Extent of Permanent or Temporary R/W Impacts (Major or Minor)		● Reconstruction of E. 55th Street Station parking lot and new signalized access location ● Potential temporary restrictions due to E. 55th Street Bridge and Kinsman Road bridge widening ● Right of way required from train loop in Kingsbury Valley to construct bridge pier ● rerouting of drive access to train maintenance facility from Grand Avenue ● Potential temporary restrictions due to new bridge over train loop and RTA Blue/Green line		● Relocation and reconstruction of RTA electric substation ● Reconstruction of E. 55th Street parking structure on bridge deck ● Potential temporary restrictions due to Kinsman Road bridge widening ● Right of way required from train loop in Kingsbury Valley to construct bridge pier ● rerouting of drive access to train maintenance facility from Grand Avenue ● Potential temporary restrictions due to new bridge over train loop and RTA Blue/Green line		● Reconstruction of E. 55th Street Station parking lot ● Potential temporary restrictions due to Kinsman Road bridge widening ● Right of way required from train loop in Kingsbury Valley to construct bridge pier ● Rerouting of drive access to train maintenance facility from Grand Avenue ● Potential temporary restrictions due to new bridge over train loop and RTA Blue/Green line
Structures							
Roadway Bridges	Location and number of new/rebuilt roadway bridges required	3	● New Bridge over Kingsbury Run ● Widened Kinsman Road Bridge over RTA ● New bridge over RTA Blue/Green line	7	● Three new bridges for ramp and mainline braiding ● New bridge under E. 55th Street ● New Bridge over Kingsbury Run ● Widened Kinsman Road Bridge over RTA ● New bridge over RTA Blue/Green line	4	● New bridge under E. 55th Street ● New Bridge over Kingsbury Run ● Widened Kinsman Road Bridge over RTA ● New bridge over RTA Blue/Green line
Rail Bridges	Location and number of new/rebuilt rail bridges		None		None		None
Cost Data (2010 Dollars)							
Cost **	Estimated Cost (range)		$95,500,000		$145,800,000		$108,000,000
Recommended for further Study	Yes/No		Yes		No		Yes

* Structure totals are for buildings impacted regardless of occupancy. Relocation totals are total number of individual units not including boarded up residential structures

** Includes Construction, Engineering Design, Construction Administration, R/W land & Relocation and Contingencies. Does not include Utility Relocation Costs

Opportunity Corridor
Step 5 - Central Section Alternates
Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)	Alternate A (Discontinuous Woodland West of Rec. Center)	Alternate B (Continuous Woodland West of Rec. Center)	Alternate C (Continuous Woodland East of Rec. Center)
Purpose and Need Issues				
Economic Development Potential	Direct/Improved access to City identified Opportunity Corridor Development Districts	● Improved site access created to/from Districts 4 and 9 via boulevard to E. 79th Street ● Direct access and new frontage (Improved visibility) created for Districts 2, 3, 5, 6 & 7 via boulevard	● Improved site access created to/from Districts 4 and 9 via boulevard to E. 79th Street ● Direct access and new frontage (Improved visibility) created for Districts 2, 3, 5, 6 & 7 via boulevard	● Improved site access created to/from Districts 4 and 9 via boulevard to E. 79th Street ● Direct access and new frontage (Improved visibility) created for Districts 2, 3, 5, 6 & 7 via boulevard
Community Benefits	Neighborhood - level benefits	● Addition of sidewalk and multi-purpose path along proposed boulevard ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the proposed Kingsbury Run Connector Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities and new connections between neighborhoods ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system	● Addition of sidewalk and multi-purpose path along proposed boulevard ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the proposed Kingsbury Run Connector Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities and new connections between neighborhoods ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses; ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system	● Addition of sidewalk and multi-purpose path along proposed boulevard ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the proposed Kingsbury Run Connector Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities and new connections between neighborhoods ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system
Local Access & Mobility	Access changes and improvements to Interstate system access	Direct access to freeway system provided from arterial network at E. 79th, Buckeye, Woodland and Quincy via the Blvd.	Direct access to freeway system provided from arterial network at E. 79th, Buckeye, Woodland and Quincy via the Blvd.	Direct access to freeway system provided from arterial network at E. 79th, Buckeye, Woodland and Quincy via the Blvd.
	Impacts to existing street network	Discontinuity on Woodland Ave between E. 89th Street and E. 93rd Street; requires the cul-de-sac of E. 84th Street north of Woodland Avenue; E. 86th Street and E. 93rd Street to be relocated; Lisbon Road to be removed; and either a cul-de-sac be construction at E. 87th Street and Evins Avenue near the boulevard or they connect to the boulevard.	Cul-de-Sac of E89th north of NS railroad trench and south of boulevard; removal of Tennyson Road, and E. 87th Street; Possible vacation of Quincy Ave under CSX ; Removal or cul-de-sac of Evarts Road	Relocation of E. 93rd Street and Cumberland Avenue to form a new intersection west of CSX railroad; a cul-de-sac would also be constructed on E. 93rd Street south of the proposed boulevard; Kennedy Avenue would be closed at CSX and removed to the west; Yeakel and Steinway Avenues may require closure to facilitate CSX bridge construction at Buckeye Road; E. 90th Street would require that the access be revised from Buckeye Road to the boulevard due to the location of the Buckeye/Boulevard intersection; removal of E. 89th Street south of Buckeye Road; Evarts Road to be connected to or cul-de-saced near the proposed boulevard

Opportunity Corridor
Step 5 - Central Section Alternates
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Regional Access & Mobility	Intersection Level of Service		All Intersections at LOS C or better		All Intersections at LOS C or better		All Intersections at LOS C or better
Modal Options	Bus, Bicycle and Pedestrian facilities (Improved, Neutral, or Reduced)	Improved	● Addition of sidewalks and multi-purpose path connecting E55th to Kinsman and points east ● Potential for new local and express bus service ● Potential rerouting of No. 10 bus line (E105th to Quincy to Fairhill) and No. 11 bus line (Quincy to Fairhill)	Improved	● Addition of sidewalks and multi-purpose path connecting E55th to Kinsman and points east ● Potential for new local and express bus service ● Potential rerouting of No. 10 bus line (E105th to Quincy to Fairhill) and No. 11 bus line (Quincy to Fairhill)	Improved	● Addition of sidewalks and multi-purpose path connecting E55th to Kinsman and points east ● Potential for new local and express bus service ● Potential rerouting of No. 10 bus line (E105th to Quincy to Fairhill) and No. 11 bus line (Quincy to Fairhill)
Environmental resources							
Cultural Resources/Section 4(f)							
NRHP listed/NRHP eligible sites	Number of sites and extent of impact	1	Possible ● Widening of Woodland Ave. for boulevard opposite of Kenneth Johnson (Woodland) Rec. Center	2	Possible ● Widening of Buckeye Rd. opposite of St. Elizabeth's Catholic Church ● Widening of Woodland Ave. opposite of Kenneth Johnson (Woodland) Rec. Center	1	Possible ● Boulevard in proximity to and widening of Buckeye Rd. adjacent to St. Elizabeth's Catholic Church
Cleveland Landmark sites impacted	Number of sites and extent of impact	1	Possible ● Widening of Woodland Ave. for boulevard opposite of Kenneth Johnson (Woodland) Rec. Center	2	Possible ● Widening of Buckeye Rd. opposite of St. Elizabeth's Catholic Church ● Widening of Woodland Ave. opposite of Kenneth Johnson (Woodland) Rec. Center	1	Possible ● Boulevard in proximity to and Buckeye Rd. widening opposite of St Elizabeth's Catholic Church;
Parks/Recreational Facilities/Section 4(f)							
Parks/Recreational Facilities	Number of existing parks and extent of impact	1	Possible ● Widening of Woodland Ave. for boulevard opposite of existing Kenneth Johnson Rec. Center ● Uses portions of 7 parcels (0.09 acres) associated with planned expansion of Kenneth Johnson Rec. Center to widen Buckeye Rd.	1	Possible ● Widening of Woodland Ave. opposite of existing Kenneth Johnson Rec. Center ● Uses portions of 8 parcels (0.09 acres) associated with planned expansion of Kenneth Johnson Rec. Center to widen Buckeye Rd.	1	Possible ● Uses 8 whole parcels and portions of 20 parcels (1.57 acres) associated with planned expansion of Kenneth Johnson Rec. Center to construct proposed boulevard and to widen Buckeye Rd.
Section 6(f)							
Section 6(f) Resource Impacts	Number of resources and extent of impact		None		None		None
Ecological							
Stream crossings	Number of stream crossing impacts		None		None		None
Quality wetland impacts	Number of wetlands impacted		None		None		None
Threatened and endangered species impacts	Yes / No		No		No		No
Hazardous materials							
High Probability Sites	Number of identified ESA Screening sites	60		52		50	

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Evaluation Criteria/Alternate	Unit of Measure (Step 5)	Alternate A (Discontinuous Woodland West of Rec. Center)	Alternate B (Continuous Woodland West of Rec. Center)	Alternate C (Continuous Woodland East of Rec. Center)
Environmental justice				
Benefits to environmental justice populations	Access; Mobility; Safety; Environmental; Visual; Economic; Community Impacts	● Addition of sidewalk and multi-purpose path along proposed boulevard and intersecting roadways ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential support of existing commercial business through increased traffic ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system	● Addition of sidewalk and multi-purpose path along proposed boulevard and intersecting roadways ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential support of existing commercial business through increased traffic ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system	● Addition of sidewalk and multi-purpose path along proposed boulevard and intersecting roadways ● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood, and the proposed Lake to Lakes trail in University Circle ● Potential for local jobs through creation of re-development opportunities ● Potential support of existing commercial business through increased traffic ● Removal of abandoned structures within proposed right-of-way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system
Impacts to environmental justice populations	Traffic; Noise; Residential Relocations; Business Relocations; Community Impacts; Access; Temporary Construction Impacts	● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust) ● Displacement of Greater Roman Baptist Church and Faith Holiness Temple ● Loss of Woodland Avenue and E93rd St. continuity	● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust) ● Displacement of Greater Roman Baptist Church and Faith Holiness Temple ● Loss of E89th St. continuity	● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust) ● Loss of local street continuity and connectivity (Kennedy, Yeakel, Steinway, E89th, E90th)
Utility Relocation Issues				
Major Utility Concerns/Impacts (fiber optic; sub stations, etc.)	List of major utilities	NEORSD interceptor along Woodland (33"); buckeye (72") and E. 79th; 80" combined sewer along E79th; NEORSD Regulator at E79th/Grand; 5 fiber optic lines along NS Cleveland line; fiber optic along NS Nickelplate line; power transmission towers parallel to NS Cleveland line; water transmission lines along Quincy (48") and Woodland (48" & 30"); 8" gas main along E79th	NEORSD interceptor along Woodland (33"); buckeye (72") and E. 79th; 80" combined sewer along E79th; NEORSD Regulator at E79th/Grand; 5 fiber optic lines along NS Cleveland line; fiber optic along NS Nickelplate line; power transmission towers parallel to NS Cleveland line; water transmission lines along Quincy (48") and Woodland (48" & 30"); 8" gas main along E79th	NEORSD interceptor along Woodland (27"); buckeye (60") and E. 79th; 80" combined sewer along E79th; NEORSD Regulator at E79th/Grand; 5 fiber optic lines along NS Cleveland line; fiber optic along NS Nickelplate line; power transmission towers parallel to NS Cleveland line; water transmission lines along Quincy (48"), Woodland (48" & 30") and E93rd (30'); 8" gas main along E79th

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Right of Way							
Structure Impacts*							
Residential	Number of structures impacted (estimate of units for relocation)	4 (7)		8 (11)		14 (18)	Residential impacts primarily at E89th St. and at Kennedy Ave.
Religious Structure Impacts	Number of structures impacted	2	Greater Roman Baptist Church; Faith Holiness Temple	2	Greater Roman Baptist Church; Faith Holiness Temple	0	None
Institutional/Civic Structure Impacts	Number/description of structures impacted (# relocations)	0	None	0	None	1	Ken Johnson Rec. Ctr. = No structure take but land needed from expansion area;
Commercial Structure Impacts	Number of structures impacted (# relocations) Description of businesses impacted	16 (11)	Former Van Dorn Complex (vacant); Ohio Brush; Indust. Build abutting NS mainline (vacant); John's Auto Diagnostics; Most Worshipful Rising Heights Grand Lodge AF&AM Inc.; Super Service/Peacock Autobody; Marathon Gas Station; Former John's lumber company (vacant); Club Center; Bruder Inc.; Kash Auto Repair; Kash Auto Salvage and Wrecking; Forge Products; Indust. Building east of Forge Products (vacant); Former DeNiro's Car Wash (vacant)	16 (10)	Former Van Dorn Complex (vacant); Amclo Inc.; Former Empigard Metal finishing (vacant and part demo.); Taylor Touch; Most Worshipful Rising Heights Grand Lodge AF&AM Inc.; Super Service/Peacock Autobody; Marathon Gas Station; Former Elson's build (vacant); Club Center; Bruder Inc.; Kash Auto Repair; CBF Industries; Joe's Garage; Former Peerless Auto Indust. building (vacant); former Model Box Co. Indust. building (vacant); Former DeNiro's Car Wash (vacant)	9 (4)	Former Van Dorn Complex (vacant); Former Empigard Metal finishing (vacant and part demo.); Miceli's Warehouse; Former Elson's build (vacant); Vacant commercial at 9502 Woodland; Lusters Bubbles Car Wash/Fathers Dream Appliances; Indust. Building east of Forge Products (vacant); Former Victoreen Building (vacant); Former DeNiro's Car Wash (vacant)
Freight Rail Impacts	Extent of Permanent or Temporary R/W Impacts	0	NS - temporary restrictions to mainline due to construction of new mainline structure over Boulevard; potential temporary restrictions to Nickelplate line due to Buckeye Road bridge widening and Woodland Avenue bridge demolition.		NS - temporary restrictions to mainline due to construction of new mainline structure over Boulevard; potential temporary restrictions to Nickelplate line due to E. 89th Street bridge demolition.		NS - temporary restrictions to mainline due to construction of new mainline structure over Boulevard; CSX - temporary mainline impacts for CSX over Woodland Ave. bridge reconstruction and Kennedy Ave. removal; potential impacts for CSX over Buckeye Ave. reconstruction and Steinway and Yeakel Ave. bridge removals
GCRTA Impacts	Extent of Permanent or Temporary R/W Impacts		Potential temporary restrictions to Red Line due to Buckeye Road bridge widening and Woodland Ave. bridge demolition; possible extended bus routing times along Woodland Avenue due to discontinuity.		Potential temporary restrictions to Red Line due to E. 89th Street bridge demolition		None
Structures							
Roadway Bridges	Location and number of new/rebuilt roadway bridges required	1	Rebuilt Buckeye bridge over NS/RTA;	0	None	0	None
Rail Bridges	Location and number of new/rebuilt rail bridges	1	New NS rail bridge over Boulevard	1	New NS rail bridge over Boulevard	2	New NS rail bridge over Boulevard; Rebuild CSX bridge over Woodland Avenue
Cost Data (2010 Dollars)							
Cost **	Estimated Cost (range)		$73,200,000		$83,500,000		$79,400,000
Recommended for further Study	Yes/No		Yes		Yes		No

* Structure totals are for buildings impacted regardless of occupancy. Relocation totals are total number of individual units not including boarded up residential structures

** Includes Construction, Engineering Design, Construction Administration, R/W land & Relocation and Contingencies. Does not include Utility Relocation Costs

Opportunity Corridor
Step 5 - East Section Alternates
Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)		Alternate A (Western Widening)		Alternate B (Symmetric Widening)		Alternate C (Eastern Widening)
Purpose and Need Issues							
Economic Development Potential	Direct/Improved access to City identified Opportunity Corridor Development Districts		● Improved site access created to/from District 10 via boulevard to Cedar Road ● Direct access created for District 8 via boulevard		●Improved site access created to/from District 10 via boulevard to Cedar Road ● Direct access created for District 8 via boulevard		●Improved site access created to/from District 10 via boulevard to Cedar Road ● Direct access created for District 8 via boulevard
Community Benefits	Neighborhood - level benefits		● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the proposed Kingsbury Run Connector Path in the Kinsman neighborhood ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic-and pedestrian-generated human presence ● Improved access to Interstate system		● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the proposed Kingsbury Run Connector Path in the Kinsman neighborhood ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system		● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the proposed Kingsbury Run Connector Path in the Kinsman neighborhood ● Potential for local jobs through creation of re-development opportunities ● Potential improvement to community cohesion through increased re-development opportunities ● Potential support of existing commercial business through increased traffic/visibility ● Removal of abandoned structures within proposed right-of way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system
Local Access & Mobility	Access changes and improvements to Interstate system access		Access to I-77/I-490 enhanced via Boulevard; Existing access to the interstate system maintained via Innerbelt and MLK		Access to I-77/I-490 enhanced via Boulevard; Existing access to the interstate system maintained via Innerbelt and MLK		Access to I-77/I-490 enhanced via Boulevard; Existing access to the interstate system maintained via Innerbelt and MLK
	Impacts to existing street network		None		None		None
Regional Access & Mobility	Intersection Level of Service		All Intersections at LOS C or better		All Intersections at LOS C or better		All Intersections at LOS C or better
Modal Options	Bus, Bicycle and Pedestrian facilities (Improved, Neutral, or Reduced)	Improved	Potential for new local and express bus service.	Improved	Potential for new local and express bus service.	Improved	Potential for new local and express bus service.

Opportunity Corridor

Step 5 - East Section Alternates

Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)	Alternate A (Western Widening)		Alternate B (Symmetric Widening)		Alternate C (Eastern Widening)	
Environmental resources							
Cultural Resources/Section 4(f)							
NRHP listed/NRHP eligible sites	Number of sites and extent of impact	5	Possible ● Widening of E105th St. adjacent to Wade Park Historic District ● Widening of E105th St. opposite of Pentecostal Church of Christ, Park Lane Villa, The Temple Tifereth Israel ● Widening of Carnegie Ave. adjacent to Cleveland Club (Tudor Arms) building	5	Possible ● Widening of E105th St. adjacent to Wade Park Historic District ● Widening of E105th St. opposite of Pentecostal Church of Christ, Park Lane Villa, The Temple Tifereth Israel ● Widening of Carnegie Ave. adjacent to Cleveland Club (Tudor Arms) building	5	Possible ● Widening of E105th St. adjacent to Wade Park Historic District ● Widening of E105th St. opposite of Pentecostal Church of Christ, Park Lane Villa, The Temple Tifereth Israel ● Widening of Carnegie Ave. adjacent to Cleveland Club (Tudor Arms) building
Cleveland Landmark sites impacted	Number of sites and extent of impact	2	Possible ● Widening of E105th St. opposite of Pentecostal Church of Christ ● Widening of Carnegie Ave. adjacent to Cleveland Club (Tudor Arms) building	2	Possible ●Widening of E105th St. opposite of Pentecostal Church of Christ ●Widening of Carnegie Ave. adjacent to Cleveland Club (Tudor Arms) building	2	Possible ●Widening of E105th St. opposite of Pentecostal Church of Christ ●Widening of Carnegie Ave. adjacent to Cleveland Club (Tudor Arms) building
Parks/Recreational Facilities/Section 4(f)							
Parks/Recreational Facilities	Number of resources and extent of impact		None		None		None
Section 6(f)							
Section 6(f) Resource Impacts	Number of resources and extent of impact		None		None		None
Ecological							
Stream crossings	Number of stream crossing impacts		None		None		None
Wetland impacts	Number of wetlands impacted		None		None		None
Threatened and endangered species impacts	Yes / No		No		No		No
Hazardous materials							
High Probability Sites	Number of identified ESA Screening sites	26		25		26	
Environmental justice							
Benefits to environmental justice populations	Access; Mobility; Safety; Environmental; Visual; Economic; Community Impacts		● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood ● Potential for local jobs through creation of re-development opportunities ● Removal of abandoned structures within proposed right-of way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system		● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood ● Potential for local jobs through creation of re-development opportunities ● Removal of abandoned structures within proposed right-of way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system		● Improved access to recreational amenities such as Kenneth L. Johnson Recreation Center and the Kingsbury Run Connector Tow Path in the Kinsman neighborhood ● Potential for local jobs through creation of re-development opportunities ● Removal of abandoned structures within proposed right-of way ● Relocation effects may benefit some residences and businesses ● Clean-up of sites of environmental concern within proposed right-of-way ● Opportunity for enhanced neighborhood identity through gateways, wayfinding and public art ● Aesthetic enhancement opportunities along proposed boulevard ● Enhanced security through traffic- and pedestrian-generated human presence ● Improved access to Interstate system
Impacts to environmental justice populations	Traffic; Noise; Residential Relocations; Business Relocations; Community Impacts; Access; Temporary Construction Impacts		● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust) ● Displacement of Christ Centered Missionary Baptist Church		● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust)		● Potential increase in traffic on intersecting roadways ● Potential noise increase resulting from higher traffic volumes ● Residential relocations ● Business displacements ● Temporary construction impacts (noise, vibration, dust)

Opportunity Corridor
Step 5 - East Section Alternates
Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)	Alternate A (Western Widening)		Alternate B (Symmetric Widening)		Alternate C (Eastern Widening)	
Utility Relocation Issues							
Major Utility Concerns/Impacts (fiber optic; sub stations, etc.)	List of major utilities within Alternate footprint		Substantial underground utility infrastructure along E. 105th Street , 36" water main; 36 duct telephone bank; 8.5" gas main, 105" NEORSD interceptor sewer and up to 48 electrical ducts.		Substantial underground utility infrastructure along E. 105th Street , 36" water main; 36 duct telephone bank; 8.5" gas main, 105" NEORSD interceptor sewer and up to 48 electrical ducts.		Substantial underground utility infrastructure along E. 105th Street , 36" water main; 36 duct telephone bank; 8.5" gas main, 105" NEORSD interceptor sewer and up to 48 electrical ducts.
Right of Way							
Structure Impacts*							
Residential	Number of structures impacted (estimate of residential units impacted)	7 (11)	Includes one multi-unit apartment	5 (14)	Includes one multi-unit apartment	3 (6)	
Religious Structure Impacts	Number/name of church relocations required)	1	Church of God in Christ, Christ Centered Missionary	0	None	0	None
Institutional/Civic Structure Impacts	Number/description of structures impacted	0	None	0	None	0	None
Commercial Structure Impacts	Number of structures impacted (# relocations) Description of businesses impacted	2 (2)	Crosstown Market; Sterling Fence & Builder	2 (2)	PNG Supermarket; Sterling Fence & Builder	2 (2)	PNG supermarket; Baby Boy dogs
Freight Rail Impacts	Extent of Permanent or Temporary R/W Impacts		NS - Potential temporary restrictions to Nickelplate Line for reconstruction of E. 105th Street bridge		NS - Potential temporary restrictions to Nickelplate Line for reconstruction of E. 105th Street bridge		NS - Potential temporary restrictions to Nickelplate Line for reconstruction of E. 105th Street bridge
GCRTA Impacts	Extent of Permanent or Temporary R/W Impacts		Potential temporary restrictions to Red Line for reconstruction of E. 105th Street bridge		Potential temporary restrictions to Red Line for reconstruction of E. 105th Street bridge		Potential temporary restrictions to Red Line for reconstruction of E. 105th Street bridge
Structures							
Roadway Bridges	Location and number of new/rebuilt roadway bridges required	1	Widen E. 105th Street bridge over GCRTA Red Line/NS Nickel Plate Line	1	Widen E. 105th Street bridge over GCRTA Red Line/NS Nickel Plate Line	1	Widen E. 105th Street bridge over GCRTA Red Line/NS Nickel Plate Line
Rail Bridges	Location and number of new/rebuilt rail bridges	0	None	0	None	0	None
Cost Data (2010 Dollars)							
Cost **	Estimated Cost (range)		$22,800,000		$22,500,000		$21,900,000
Recommended for further Study	Yes/No		No		No		Yes

* Structure totals are for buildings impacted regardless of occupancy. Relocation totals are total number of individual units not including boarded up residential structures
* Includes Construction, Engineering Design, Construction Administration, R/W land & Relocation and Contingencies. Does not include Utility Relocation Costs

Opportunity Corridor
Step 5 - No Build Alternative
Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)	No Build
Purpose and Need Issues		
Economic Development Potential	Direct/Improved access to City identified Opportunity Corridor Development Districts	● No new direct/improved District access created ● Maintain status quo - potential continuation of loss of job producing activity within study area.
Community Benefits	Neighborhood - level benefits	Maintain status quo - increasing vacancy / abandonment rates resulting in decreasing community cohesion, reduced property values, reduced visual appeal and higher crime perception from residents.
Local Access & Mobility	Access changes and improvements to Interstate system access	None
	Impacts to existing street network	None
Regional Access & Mobility	Intersection Level of Service	● Failing LOS (F) at E. 55th/I-490 intersection ● Remaining intersections within study area at LOS D or better
Modal Options	Bus, Bicycle and Pedestrian facilities (Improved, Neutral, or Reduced)	Neutral
Environmental resources		
Cultural Resources/Section 4(f)		
NRHP listed/NRHP eligible sites	Number of sites and extent of impact	None
Cleveland Landmark sites impacted	Number of sites and extent of impact	None
Potentially Historic Resources Impacted	Number of sites and extent of impact	None
Parks/Recreational Facilities/Section 4(f)		
Parks/Recreational Facilities	Number of resources and extent of impact	None
Section 6(f)		
Section 6(f) Resource Impacts	Number of resources and extent of impact	None
Ecological		
Stream crossings	Number of stream crossing impacts	None
Wetland impacts	Number of wetlands impacted	None
Threatened and endangered species impacts	Yes / No	No
Hazardous materials		
High Probability Sites	Number of identified ESA Screening sites	None impacted - contaminated sites to remain
Environmental justice		
Benefits to environmental justice populations	Access; Mobility; Safety; Environmental; Visual; Economic; Community Impacts	None
Impacts to environmental justice populations	Traffic; Noise; Residential Relocations; Business Relocations; Community Impacts; Access; Temporary Construction Impacts	Status quo - increasing vacancy / abandonment resulting in decreasing community cohesion, reduced property values, reduced visual appeal and higher crime perception
Utility Relocation Issues		
Major Utility Concerns/Impacts (fiber optic; sub stations, etc.)	List of major utilities within Alternate footprint	No impacts
Right of Way		
Structure Impacts*		
Residential	Number of structures impacted (estimate of residential units impacted)	None
Religious Structure Impacts	Number/name of church relocations required)	None
Institutional/Civic Structure Impacts	Number/description of structures impacted	None
Commercial Structure Impacts	Number of structures impacted (# relocations) Description of businesses impacted	None
Freight Rail Impacts	Extent of Permanent or Temporary R/W Impacts	None
GCRTA Impacts	Extent of Permanent or Temporary R/W Impacts	None

Opportunity Corridor
Step 5 - No Build Alternative
Evaluation Matrix

Evaluation Criteria/Alternate	Unit of Measure (Step 5)	No Build
Structures		
Roadway Bridges	Location and number of new/rebuilt roadway bridges required	None - Existing bridges to remain
Rail Bridges	Location and number of new/rebuilt rail bridges	None - Existing bridges to remain
Cost Data (2010 Dollars)		
Cost **	Estimated Cost (range)	$0
Recommended for further Study	Yes/No	Yes

* Structure totals are for buildings impacted regardless of occupancy. Relocation totals are total number of individual units not including boarded up residential structures

** Includes Construction, Engineering Design, Construction Administration, R/W land & Relocation and Contingencies. Does not include Utility Relocation Costs

Appendix C Agency Correspondence

From: Mark.Carpenter@dot.state.oh.us [mailto:Mark.Carpenter@dot.state.oh.us]
Sent: Monday, March 08, 2010 2:14 PM
To: Matt Wahl; Nichole English
Cc: John.Motl@dot.state.oh.us; Dale.Schiavoni@dot.state.oh.us
Subject: CUY-Opportunity Corridor (PID 77333): Ecological Approval: No further action required

Matt:

Below is OES's determination that no further ecological coordination is required for the Opportunity Corridor.

If you have any questions, please contact me at (216) 584-2089.

Thank you,

Mark Alan Carpenter, P.E.
District 12 Environmental Engineer
(216) 584-2089

----- Forwarded by Mark Carpenter/Planning/D12/ODOT on 03/08/2010 02:04 PM -----

Megan Michael/Environmental/CEN/ODOT

03/08/2010 10:35 AM

To Mark Carpenter/Planning/D12/ODOT@ODOT
cc Larry Hoffman/Environmental/CEN/ODOT@ODOT, Mike Pettegrew/Environmental/CEN/ODOT@ODOT
Subject CUY-Opportunity Corridor (PID 77333)

Mark,

OES has completed our review of the Level 2 ESR submitted for the subject project. The only potential resources within the study area as discussed in the report are potentially jurisdictional ditches. Based on the photographs and information submitted, these ditches would not be considered jurisdictional, as they do not have an OHWM and are not constructed in hydric soils. The ESR stated that no other resources were present within the study area. As this project will not impact any streams, wetlands, jurisdictional ditches, ponds/lakes/reservoirs, known populations of state and federally listed species, or suitable habitat for federally listed species, no further ecological coordination is required. If you have any questions, please contact me.

Megan Michael, Environmental Specialist
ODOT-CO-OES Ecological Section
1980 West Broad Street, Floor 3
Columbus, Ohio 43223
(614) 644-7099/megan.michael@dot.state.oh.us

c. File

OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223
TED STRICKLAND, GOVERNOR • JOLENE M. MOLITORIS, DIRECTOR

OFFICE OF ENVIRONMENTAL SERVICES

June 18, 2010

Mr. Mark Epstein, Department Head
Resource Protection and Review
Ohio Historic Preservation Office
1982 Velma Avenue
Columbus, Ohio 43211

Attn: Nancy Campbell, ODOT Review Manager, History/Architecture
Thomas Grooms, ODOT Review Manager, Archaeology

SUBJECT: CUY-Opportunity Corridor PID 77333

RE: Initiation of the Section 106 Consultation Process

Dear Mr. Epstein:

On May 29, 2010, ODOT, on behalf of FHWA, formally initiated Section 106 consultation with the Ohio State Historic Preservation Office (OSHPO) to ensure identification and consultation efforts are commensurate with the undertaking and type of cultural resources located within the study corridor. ODOT provided an overview of the undertaking, now in Step 5, of the Major Project Development Process. Step 5, of the planning process, includes the identification of significant cultural resources; as well as, the identification of properties or areas that will require additional consideration in later stages of project development. Previously, public involvement meetings were conducted with five individual neighborhood groups between September 2009 and March 2010. In addition, the project management team began meeting with the stakeholders. Subsequent, NEPA public involvement meetings will be held later this summer. Efforts to identify Section 106 consulting parties will be incorporated into the upcoming public involvement meeting formats.

Provided for your reference, as an attachment, is a summary of cultural resource consultation conducted to date. Questions or comments may be forwarded to Susan Gasbarro, Team Leader, History/Architecture, Office of Environmental Services, at susan.gasbarro@dot.state.oh.us or 614-728-0719, or to Larry Hoffman, ODOT-OES, Project Manager, Office of Environmental Services, at larry.hoffman@dot.state.oh.us or 614-466-6439.

Respectfully,

Paul Graham, for

Timothy M. Hill
Administrator
Office of Environmental Services

TMH/sg
Attachment

C: Adam Johnson, FHWA; Mark Carpenter, ODOT-District 12; Project file; Reading file

Attachment

Summary of Section 106 Consultation
April - June 2010
CUY-Opportunity Corridor, PID 77333

- April 5, 2010 - Ohio State Historic Preservation Office (OSHPO) received the April 1, 2010 formal request for consultation in regard to the draft Phase I history/architecture survey report, dated January 2009.

- May 19, 2010 - Joint field review was conducted ODOT and OSHPO of the study corridor. In addition, the team met with the Hungarian Historical Society to gather information about the study area and to assist in the identification of potential consulting parties.

- May 29, 2010 - Section 106 Consultation Initiation Meeting with the OSHPO review team. The team is currently working together to scope the level of documentation and identification efforts required at this step in the project development process. As a result of the May 19, 2010 field review and the May 29, 2010 consultation meeting, the following actions were recommended:

  - ODOT will prepare a request for revisions in regard to the documentation presented by the draft Phase I history/architecture report.

  - ODOT will identify areas that may have the potential for significant archaeological resources and the level of investigations required at this step in the project development process.

  - ODOT will conduct additional field reviews prior to issuing comments to ensure the revision request is sufficient in scope to facilitate future investigations.

  - ODOT will prepare a list of potential Section 106 Consulting Parties and an application to become a Section 106 Consulting Party for distribution at the upcoming series of NEPA public involvement meetings.

  - ODOT project management team will provide revised maps of the study corridor to facilitate the ODOT-OES and the OSHPO review.

  - ODOT project management team will contact the consultant team and inquire as to the format of the history/architecture table. They will forward this information to the OSHPO. The OSHPO provide recommendations as to how the draft Phase I history/architecture resource table should be revised to correspond with the OSHPO's database program.

  - ODOT will ensure documentation is prepared in a manner for ease of review by the Section 106 Consulting Parties.

OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223
TED STRICKLAND, GOVERNOR • JOLENE M. MOLITORIS, DIRECTOR

OFFICE OF ENVIRONMENTAL SERVICES

April 1, 2010

Mr. Mark Epstein, Department Head
Resource Protection and Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211

Attn: Thomas Grooms, ODOT Review Manager, Archaeology

Subject: CUY-Opportunity Corridor (PID 77333)

Dear Mr. Epstein:

In compliance with the National Environmental Policy Act (NEPA), Section 4(f), and Section 106, the identification of archaeological cultural resources has been initiated early in the project development process for the subject undertaking. The area of potential effects includes an area sufficient in size to accommodate all alternatives under consideration. A preferred alternative has not been identified at this stage in the project development process. The NEPA public involvement process has been initiated. A copy of the *Phase I Archaeological Literature Review, Prehistoric Context, and Archaeological Sensitivity Assessment for the CUY-Opportunity Corridor Project (PID 77333), City of Cleveland, Cuyahoga County, Ohio* (2010) by ASC Group, Inc. has been provided to your office. This report provides information regarding the project location and environmental setting, area of potential effects, previously identified archaeological sites or surveyed areas, the results of the literature review, and the identification of areas of archaeological interest.

A concurrent review of the report noted above by the Ohio Department of Transportation's Office of Environmental Services (ODOT/OES) cultural resource staff and the Ohio Historic Preservation Office (OHPO) is requested. A field meeting and review of the area of potential effects will be conducted in late April or early May 2010. As a result, comments or requests for additional information or clarification will be forwarded to the project management team. The approved document will then be submitted to the OHPO for formal review and concurrence. Questions or concerns may be addressed to Larry Hoffman, ODOT-OES, at 614-466-6439, or to Megan Shaeffer, ODOT/OES, at 614-752-8279.

Respectfully,

Paul Graham, for

Timothy M. Hill
Administrator
Office of Environmental Services

TMH:mks
Enclosure
C: Carpenter, ODOT-District 12; Project File; Reading File

Attendees CUY-Opportunity Coordior PID: 77333

John Mottl	ODOT D-12	teleconference 216-584-2085
Mark Carpenter	ODOT D-12	216-584-2086
Susan Casbarro	-ODOT-OES	614-728-0719
Mark Epstein	OHPO	614.298.2000
Thomas Grooms	OHPO	614-298-2000
Nancy Campbell	OHPO	614-298-2000
Tom Barrett	ODOT-OES	614-466-5852
Paul Graham	ODOT/OES	614-466-5099
Larry Hoffman	ODOT, OES	614-466-6439

Ohio Department of Natural Resources

TED STRICKLAND, GOVERNOR SEAN D. LOGAN, DIRECTOR

Division of Natural Areas and Preserves
Anthony J. Celebreeze, III, Acting Chief
2045 Morse Rd., Bldg. F-1
Columbus, OH 43229-6693
Phone: (614) 265-6453; Fax: (614) 267-3096

September 29, 2009

Debra White
Michael Baker Jr., Inc.
1228 Euclid Ave., Suite 1050
Cleveland, OH 44115

Ms. White:

I have reviewed our Natural Heritage maps and files for the CUY-Opportunity Corridor project area, including a one mile radius, from I-490 to E. 105th St. in Cleveland, Cuyahoga County, and on the East Cleveland, Cleveland South and Shaker Heights Quads (119732). The numbers/letters on the list below correspond to the areas marked on the accompanying map. Common name, scientific name and status are given for each species.

Cleveland North/East Cleveland/Cleveland South/Shaker Heights Quads

A. Rockefeller Park - City of Cleveland
1. *Falco peregrinus* - Peregrine Falcon, threatened
2. Cave or Cavern
3. *Hieracium umbellatum* - Canada Hawkweed, threatened
4. *Falco peregrinus* - Peregrine Falcon, threatened

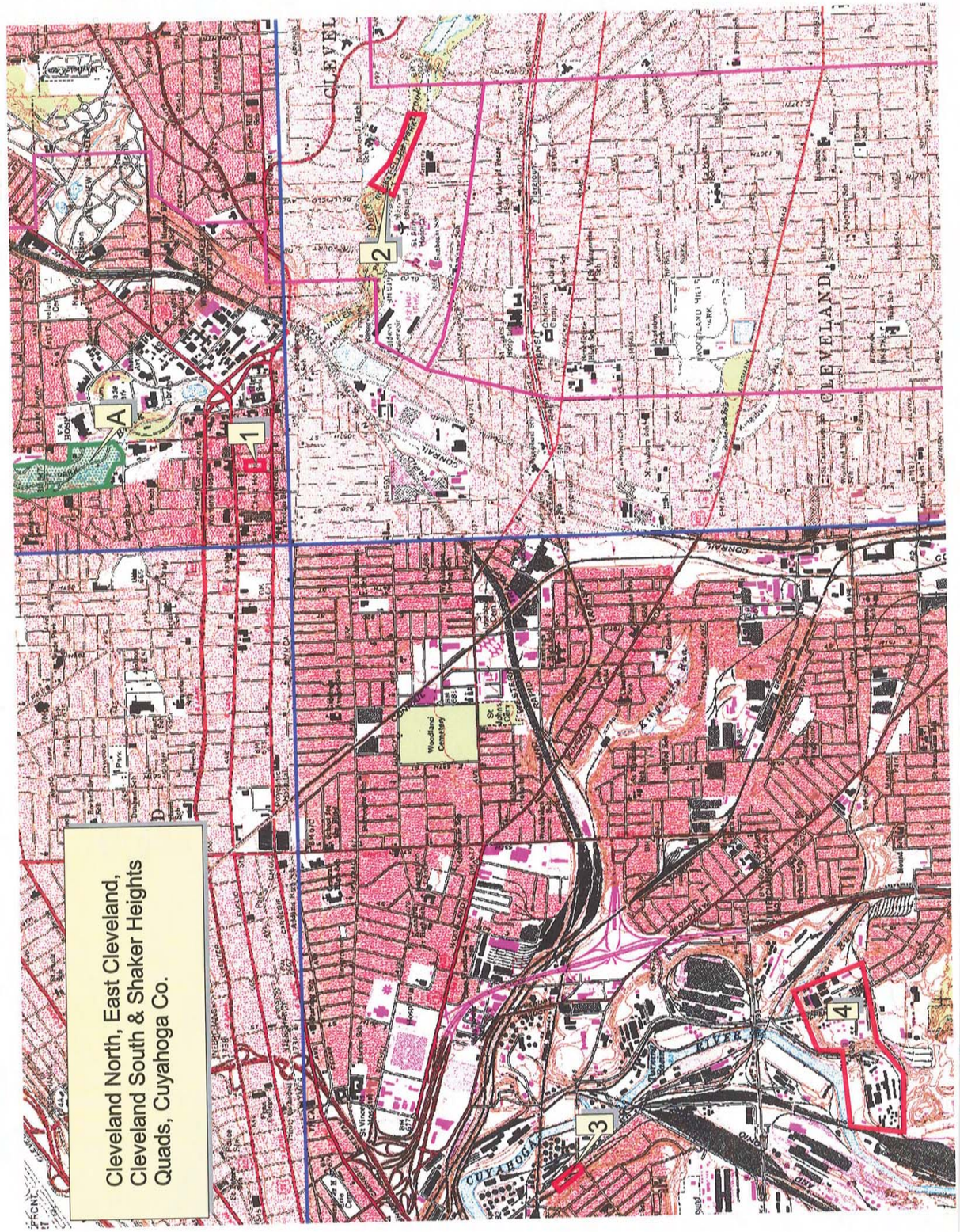
There are no dedicated state nature preserves or scenic rivers at the project site. We are unaware of any animal assemblages, state parks, state forests or state wildlife areas within a one mile radius of the project area. We also have no records for Indiana Bat (*Myotis sodalis*, state endangered, federal endangered) capture locations within a five mile radius or hibernacula within a ten mile radius of the project site.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke, Ecological Analyst
Natural Heritage Program



Appendix D Public Involvement Summary

Public Involvement Summary

Steering Committee Meetings

The public involvement for the study is led by a project Steering Committee comprised of organizations representing transportation interests in the Opportunity Corridor study area. Input provided at Steering Committee meetings helped guide the development of the alternatives. Steering Committee members represent:

- Buckeye Area Development Corporation
- Buckeye Community
- Burten Bell Carr Development Corporation
- City of Cleveland
- City of Cleveland Council (Wards 5, 6, and 12)
- Cuyahoga County
- Cuyahoga County Engineer's Office (CCEO)
- Early Stage Partners, LP
- Fairfax Community
- Fairfax Renaissance Development Corporation
- Greater Cleveland Partnership (GCP)
- Greater Cleveland Regional Transit Authority (GCRTA)
- Kinsman Community
- New Era Builders
- Northeast Ohio Areawide Coordinating Agency (NOACA)
- North Shore Federation of Labor
- Ohio Department of Development
- Ohio Department of Transportation (ODOT)
- Orlando Baking Company
- Slavic Village Development Corporation
- Slavic Village/St. Hyacinth Community
- State of Ohio
- The Plain Dealer
- University Circle Community
- University Circle, Inc.

The Steering Committee's role is to offer qualitative observations, react to proposals and work together to gain broad public support. Three Steering Committee meetings were held on September 1, 2009, March 11, 2010 and September 8, 2010. The first Steering Committee meeting was held at Greater Cleveland Partnership's Facility. Presentations were given by HNTB, Greater Cleveland Partnership, and the City of Cleveland. This meeting provided an overview of the study process, the goals and objectives, a summary of the information gathered to date, and the conceptual alternatives. The information gathered was used to refine the information presented at Public Meeting #1. The second Steering Committee meeting was held at the Karamu House in Cleveland. Presentations were given by HNTB, Greater Cleveland Partnership, and the City of Cleveland. HNTB's presentation focused on alignments and details of the alternates developed during Step 5. A handout was distributed displaying nine alignments, three alternatives at each of the three sections of study. GCP provided an overview of the comments received from the public. Their consultants presentation focused on two of the cities identified economic development areas. The third committee meeting was held at the Cleveland Plain Dealer. Presentations were given by ODOT and the City of Cleveland. The City's presentation provided an overview of land use changes recently adopted by the City of Cleveland. ODOT's presentation provided an evaluation of the conceptual alternatives developed during Step 5 and the recommendation of alternatives to be further developed during Step 6.

Public Meeting #1

The first set of public meetings for the Opportunity Corridor Study was held on Tuesday, September 22, 2009. To increase public attendance two public meetings were held, a daytime meeting held between 11:30 AM to 1:30 PM as well as an evening meeting held between 6:00 PM to 8:00 PM. The daytime meeting was held at the Cleveland Play House, 8500 Euclid Avenue, Cleveland, Ohio 44106 to capture the people who work in and around the project study area. The evening meeting was held at Mt. Sinai Baptist Church, 7510 Woodland Avenue, Cleveland, Ohio 44104 for those who could not attend the daytime meeting, specifically people who live in the study area and work during the day. Both meeting places are within proximity of the study area.

Several locations were considered for the daytime meeting including: John Hay High School, Case Western Reserve University, Cleveland Clinic, Cleveland Public Library, Judson Manor, Temple Tifereth Israel, and the Cleveland Playhouse. The preference was to have the meeting in a public location which was easily identifiable to the community. The first choice, John Hay High School, a public school facility, had to be eliminated since the meeting was to be held during a school day and the public would not be allowed in the public school building during school hours due to security. Rooms located at both Case Western and Cleveland Clinic were rejected due to the large campus atmosphere and the lack of free and/or easily accessible parking. Cleveland Public Library Branch on Stokes Blvd. within the University Circle area did not have a large enough facility for the meeting. Judson Manor was not selected due to the limited parking on site for a large public meeting and the ballroom was unavailable for the entire month of September. The Temple Tifereth Israel, in the northern part of the study area, was the last site rejected due to the layout of the available rooms and it is not as well known or recognizable to the overall community. While slightly northwest of the study area, Cleveland Playhouse was selected due to its proximity to University Circle's employers, closeness to GCRTA bus lines, including the Healthline along Euclid Avenue, and the abundance of free parking located on site. The meeting was held over lunch hours in order to encourage attendance by reducing the amount of time away from the workday.

The evening public meeting was held at Mt. Sinai Baptist Church in the central part of the study area. Mt. Sinai is a well known church throughout the Cleveland area with a large, open meeting space and free adjacent parking. The church was also served by a GCRTA bus line at the time of the meeting. For an evening meeting, a church location was preferred since it is viewed as a safe, open and inviting location. The 6:00 – 8:00 PM time period for the meeting was chosen as it is a standard time for public meetings in the Cleveland area. This allows people to attend on their way home from work or after they have dinner. The following sections summarize the activities that were completed prior to, during, and subsequent to that meeting.

Advertising

A media advisory advertising Public Meeting #1 was distributed to *The Call and Post* and *The Plain Dealer* newspapers, WKYC, WEWS, FOX8 and WOIO television stations and WTAM radio station on Monday, September 14, 2009. A press release about the public meeting was also distributed to the local media on Monday, September 21, 2009. Advertisements giving residents notice for the meeting were published in *The Call and Post* on Wednesday, September 16, 2009 as well as the Cleveland Plain Dealer on Sunday September 13, 2009. Along with the meeting advertisement on Sunday, September 13, 2009 the *Cleveland Plain Dealer* also published an article in their Metro section featuring the Opportunity Corridor project titled "Opportunity Corridor needed even more now, officials say" where a brief history of the project was given along with a summary of where the project currently stands. All articles published in the *Cleveland Plain Dealer* were also available on the Plain Dealer's website (www.cleveland.com). In addition to the newspaper advertisements, notice for the public meeting was also broadcast on 90.3 FM WCPN NRP Radio on Wednesday, September 16, 2009. A flyer announcing the public meeting was also mailed to all businesses and residences within the study area and similar meeting information was listed on the Ohio Department of Transportation's website. Copies of the flyers were also distributed to all members of the Steering Committee with a letter encouraging them to post and distribute the flyers. The Steering Committee includes representatives from:

- Burten Bell Carr Development Corporation
- The City of Cleveland Mayor's Office
- The City of Cleveland Council
- Cuyahoga County Treasurer
- Early Stage Partners, LP
- Fairfax Renaissance Development Corporation
- Greater Cleveland Partnership
- Greater Cleveland Regional Transit Authority
- New Era Builders
- North Shore Federation of Labor
- State of Ohio, Lieutenant Governor
- Ohio Department of Development
- Orlando Baking Company
- The Plain Dealer
- Slavic Village Development Corporation
- University Circle, Inc.

Public Meeting

One hundred sixty individuals signed in for the daytime meeting held at Cleveland Play House. The doors to the meeting were opened at 11:30 AM to allow attendees to browse exhibits and review information about the project contained in a handout distributed to attendees upon arrival. The exhibits available for viewing included display boards explaining the public involvement process and the Ohio Department of Transportation Project Development Process, display boards also included maps identifying potential red flags within the study area, existing land-use, recent and planned development, as well as recommended conceptual alternatives. At noon, individuals from the City of Cleveland, Ohio Department of Transportation and HNTB provided an overview of the study process, the goals and objectives that had been developed by the Steering Committee, a summary of the information gathered to date, and the conceptual alternatives. After the presentation a formal question and answer session was held where attendees had the opportunity to ask members of the steering committee questions regarding the project, this session lasted about 45 minutes. After the formal question and answer session individuals from the City of Cleveland and HNTB answered questions one-on-one near the displays.

One hundred twenty-seven individuals signed in to the evening meeting held at Mt. Sinai Baptist Church. This meeting was held in similar fashion to the daytime meeting. The doors to the meeting were opened at 6:00 PM where attendees were able to view the same displays shown at the daytime meeting. At 6:30 PM, the formal presentation began and similarly to the daytime meeting a formal question and answer session followed the presentation. This meeting also concluded with individuals from the City of Cleveland and HNTB answering questions one-on-one near the displays.

Along with the 287 approximate individuals that attended the first set of public meeting for the Opportunity Corridor an additional 200 public meeting handouts were distributed by either residents taking additional handouts for their neighbors who were not able to attend the meeting or by local community development corporations who distributed them to residents in their respective neighborhoods. Following the meeting, a copy of the meeting materials (handout from the public meeting, comment sheet and study area map) was mailed to all businesses that were located within the study area, but did not attend.

Public Comments

Public comments about the Opportunity Corridor Study were collected at both public meetings. The public was given the option of submitting their comments orally or on a written comment sheet. Oral comments were collected at both meetings by a court reporter and comment sheets with specific questions about the study were included in the meeting handout. Following the meeting, the public was allotted two weeks to submit comments about the project in order to be included in the summary for the meeting. People who attended the meeting were encouraged to submit comments at the meeting or via the mail using the self-mailer form included in their handout with pre-paid postage.

In general, the public agreed with the conceptual alternatives recommended for further study in Step 5. The comments indicated that the opportunity for economic development with the more southern alignments (Alternatives 2 and 4) was desirable. This is consistent with ODOT's screening process and affirms the recommendation of conceptual alternatives to be studied further in Step 5 of the PDP. Other comments suggested both concern and support for a grade-separated intersection at E. 55th and I-490. The public wanted to maintain local access while still improving traffic operations. After hearing this, ODOT developed and evaluated the quadrant roadway option. Another major concern of the public was the impacts of the project to residents and businesses. The project team continued to work to avoid and minimize these impacts during the development of alignment details in Step 5. Additional alternates within each geographic section were developed to provide more options. ODOT also refined the screening process to make displacements to homes, businesses, and churches an explicit consideration in the decision-making process. Other community goals voiced by the public included making the area more multi-modal and beautifying

the neighborhoods. The proposed boulevard is designed to include bike and pedestrian facilities that would improve multi-modal access and mobility. Although the alternatives are still at the conceptual stage, ODOT recognizes that aesthetic enhancements are important to the public and they will be evaluated at the appropriate time in the design process. Public comments also helped to formulate the process for the next set of meeting times and locations as well as meeting content. The specific oral comments, and written questions considered with answers provided on the returned comment sheets are provided below.

Oral Comments

Daytime Public Meeting

The bulleted items represent public comments; the arrows indicate the response by the meeting's emcee, Terri Hamilton Brown of Greater Cleveland Partnership.

- If the project process is expedited is it possible to benefit from some of the stimulus money?

  → Stimulus money is intended for job-ready kinds of projects. There may be a possibility to use these monies depending on how long they are available for. The project needs to go though its planning study before it would be ready to go to construction.

- How long is the project going to take until it's completed? Can the projects be broken up into smaller projects to be started and finished quicker than if it was one large project.

  → This is a project that goes from East 55th Street to East 105th Street, and the plan it to develop a route that we know will work for the entire path. If sections were taken out the road way may not create the conductivity desired. It is too early to rule out breaking the project into sections but that is not how the project is currently being approached.

- Is consideration going to be given to the adverse impacts that the project might have on businesses and residents?

  → Yes consideration will be given and the project development process was established to ensure that residents or populations are not disproportionately disadvantaged.

- Is the project going to incorporate a green initiative to increase sustainability in the area?

  → Green will be part of the plan for this project.

- The main goal of the planning committee should be to get this project in line with the stimulus money so that it can help get the project completed. This seems like a good project.

  → The project is currently in the planning stages and stimulus monies are currently not available for these types of studies.

- Many of the conceptual alternatives routes are in close proximity to the new East 55 Street rapid station. Are ideas for bike route being considered with that station?

  → RTA is represented on the steering committee and is a very close partner as the planning process continues. There is not currently a design for bike paths but those are some of the objectives the steering committee is working on together.

- Does the local stake holder committee include citizens and residents in the area? And to what degree will their input hold in our neighborhood?

→ We are committed to increasing the engagement of the public. We have in mind establishing local advisory councils in different neighborhoods. People on these councils could be anyone; residents, businesses leaders, non-profit organizations, churches and stake holders in those communities. The public is currently being represented on the steering committee.

- Will this freeway be going by the juvenile detention center?

  → This is not a freeway, it is a roadway. This project will not be an extension of I-490; it will be a roadway that will have various intersections along the way. The possible alternatives will be south of the juvenile center and it is expected that there will be an intersection at East 93rd Street that will allow for traffic to travel north and south.

- This project is going to displace a lot of families and the create neighborhoods for other people, not the current residents of the communities.

- This project is going to take my home and the history associated with it. This comment was accompanied with various questions about the Red Flag map presented at the meeting.

  → The red flags are areas are simply areas that need special consideration during the planning study. This project is currently at a conceptual level and the purpose of the meeting tonight is not to discuss taking home.

- If there was an estimate, what percentage of this project would be complete?

  → It is not possible to answer this type of question. A plan is being put together which will make a compelling argument on how this project will benefit the community.

- Is it possible for the project to go over instead of through?

  → Several alternatives are being looked at with at grade along with grade separated intersections. Part of these decisions is basing on the existing conditions, and engineers are studying this to determine what is feasible.

- There are several businesses within the project study area that are not being represented.

  → The purpose of holding the public meetings is to help engage more businesses and property owners. The process of engaging everyone is just now beginning.

- This project provides the City an opportunity to clean up some hazardous site in the neighborhoods. The alternative that would improve the highest number of hazardous sites should be selected.

- What role has the Cleveland Clinic played in the development of this project?

  → The Cleveland Clinic is a stakeholder in the community but is not a member of the steering committee. This project will support their growth and their growth will support the economic development in the area but they are not leading this effort.

- Are there going to be infrastructure improvements associated with this project?

  → Yes there will be infrastructure improvements; however the exact location of these improvements still is not determined.

Evening Public Meeting

- It seems economic development is the major goal of the project, shouldn't there also be goals to improve homes and safety in the area by beautifying the area?

  → The goals set forth today have been identified as goals approved by ODOT. Many of the things mentioned are also project goals and will help guide the process.

- Opportunity Corridor is going to destroy the neighborhood and displace families in the area. This project is only being supported to make businesses happy, not the residents. The project Steering Committee is not representative of the community and does not have the community's best interest in mind. The details of the projects have already been determined and allowing the public to comment will do little good at this point in the process.

  → This is not the first time the residents have been involved in the project. The project Steering Committee is trying to make all of the project information available to the public as soon as they can and in the best ways they can. Transparency is important during these planning stages and public involvement will continue during the next stages of development.

- African Americans have been denied the opportunity to work all across the State of Ohio. What is going to make this project different so that it provides opportunity to the people in the neighborhood and not somebody else? Many of the construction projects that are currently underway or construction projects that have been recently completed have not given opportunity to African American workers, why should we continue to support ODOT?

  → ODOT has policies in place that require minority businesses to be used on different projects within the State of Ohio. When the term "economic development" is used it refers to more than just construction jobs, it also refers to permanent jobs within the area. This project has bigger benefits to the area and if there is no development there is no opportunity for improvement.

- At this stage in the planning process is the No-Build alternative still being considered?

  → The no build alternative is still an option. If the Steering Committee and community can not develop a plan that makes sense which also has the ability to be competitive for federal funds it is possible nothing will happen.

- It should be determined what land is needed for the road as soon as possible so that property owners can be notified. It is possible that people are investing in the area only to have it taken away.

  → As the planning process continues property owners will be engaged and information regarding the require land will be shared.

- The City of Cleveland has a lot of land. While some property will be taken to build this project and create economic development, there will still be land sitting there waiting for development. Property owners need to organize to make sure they are given first opportunity to develop this land.

- The project needs to take into consideration the compensation of the elderly in the area. Many of the elderly will not benefit from the economic development since they will not be working in the new jobs.

- If the elderly are forced to leave their homes what financial institution is going to finance them in buying a new home? Also, the next set of public meetings should be held in a place where it is

easier to hear the information. There was some vital information that was lost due to the acoustics of the room.

→ A meeting room with better acoustics will used for future meetings. However, we are not at this meeting to discuss how homes will be purchased, or evaluated or financed because we have not identified the number or location of the properties.

- What are people going to do if they cannot afford to move? Where is that money going to come from?

→ The answers to this are not yet determined. Part of the overall project process is to address these issues. It is too early in the project process to begin theses conversations.

- Can you share with us what streets and neighborhoods are in the focus study area?

→ There are several maps which provide this information, including one in the handout given to all attendees, a display board, and detailed presentation slides.

- The terms "take houses" keeps being used. What exactly happens if a street or a house is about to be torn down?

→ There is an acquisition processes that is governed by federal guidelines. There are appraisals and people are compensated for their property. Some properties will need to be acquired for this project, not taken, and once these properties have been determined individual discussions will begin.

Written Comments

Below are the questions asked on the comment sheets, followed by the responses of meeting participants who returned the form.

Q: What do you see as advantages of the Opportunity Corridor? Be as specific as possible.

A: A: Project will relieve traffic at I-490 at East 55th Street and improve east west conductivity.

A: East 55th, South of I-490, may have the opportunity for industrial development.

A: Good population base for jobs in the area.

A: A: A: Improved interstate access.

A: Will provide opportunity for Cleveland's young people to get involved and shape the future of the city.

A: Project will provide a more direct route of students attending Benedictine High School.

A: Project will provide growth in University Circle.

A: Project will benefit access to big businesses in the E. 105th area.

A: A: A: A: Project will benefit the residents and revitalize the area.

A: Project must be built using the strengths of the City. Focus on using the existing entities in the region to make the project successful. Give users of the corridor a reason to stop along the corridor.

A: It would be a good idea to start at both ends and work to the middle.

A: A: Option 4 is the most feasible, it minimizes cost while maximizing benefit.

A: Keep the corridor away from the existing rail tracks. This will allow frontage in both sides of the road for faster development.

A: Agree with the 4 recommended alternatives. The at-grade I-490/East 55th intersection is preferred.

A: No advantages. Residential community will be destroyed and the benefits will not help the existing residents. The community will not allow the project to develop. Carnegie Avenue and Chester Boulevard offer adequate access.

A: No advantages. There are many developed areas within the City of Cleveland that are not being utilized, or are currently being underutilized.

A: No advantages other than temporary government and construction jobs.

A: No advantages. The corridor is being built by already employed individuals.

A: No advantages for small businesses.

A: The only advantages of the Opportunity Corridor are for the two hospitals that would benefit from the corridor.

A: No advantages. Project will increase commuter and truck traffic in the area. Project does not support elderly residents who cannot start their lives over.

A: A: No advantage to the project since it is going to take their housing.

Q: What aspects about the project are of most concern to you?

A: A: A: A: The timeline of the project is too long. The sooner the better

A: Alternative 4 is preferred because it allows both sides of the corridor to be developed.

A: The project should not even be considered.

A: How will home owners be compensated, particularly those who are on fixed incomes and cannot afford a mortgage or rent.

A: Will the project comply with "Complete Streets" policy supporting bikes, busses, and pedestrians equally?

A: Does the project create opportunity for fiber optic investment to increase internet capacity in the area?

A: Keep the project as simple as possible.

A: What impacts will this have on me and my family's home? Does the City plan on forcing people out of their homes?

A: Wasting hundreds of millions of dollars on a project that has no benefits.

A: Existing roadways are not maintained, can we afford to maintain more?

A: Will this project encourage more sprawl? This is contrary to modern public policies.

A: Will there be public transit along the corridor?

A: Keep the amount of traffic signals to a minimum so traffic can more quickly along the corridor.

A: School zone safety and speeding dangerously down East 55th Street, including criminal chases by police.

A: Biker safety.

A: No concerns.

A: The project beautifies a dead zone but it will not create jobs for the residents. It may create construction jobs and specialized jobs for Ohio residents but minimizes employment for the residents of the area impacted. This project will mostly benefit the Cleveland Clinic Foundation.

A: Displacement of residents and the disruption of daily traffic in neighborhoods.

A: Concerned that it will end up being a freeway up against the railway.

A: Concerns of congestion at East 105 Street since the roadway has only one termination point. Split the road so that there are two termination points.

A: Concerned that project maps are inaccurate.

A: A: A: That you are forcing residents out of their homes.

A: The City's ability to preserve the potential right of way for the Corridor.

A: That the final recommendation will cost so much that it will not be funded.

A: The project funding should be used to improve the existing neighborhoods, not for the construction of the new roadway.

A: There needs to be enough ingress/egress to all business/services along the corridor.

A: Although intent is to get people to University Circle, the plan should include access to RT. 2/I-90 as well.

A: Residents are concerned that people are not going to be fairly compensated for their property. Property values are so low in this area we do no t want to see the neighborhood gentrified and long time residents displaced. How will you maintain integrity of our neighborhood?

A: Opportunity Corridor is being too quickly formulated without any input from long time business property owners.

Q: What are your expectations of the future once the Opportunity Corridor has been constructed?

A: A: Neighborhood Revival and population growth.

A: A: A: A: Increased conductivity and mobility throughout the area.

A: A: A: This project will create well paying jobs for Cleveland residents.

A: The project won't be constructed, the community does not want they project.

A: If done properly, this project will be a success story that the City can build momentum from.

A: More people will move from the City to the other suburbs.

A: Increased enrollment at Benedictine High School. Opportunity Corridor will hopefully help the neighborhoods grow so no other schools and churches will need to be shut down.

A: New home construction and the demolition of abandoned homes.

A: A: More green space and available land for redevelopment.

A: The project should not be constructed if it forces one person to move.

A: A beautiful slow speed boulevard connecting I-490 to East 105Th Street.

A: Increased economic development in the area.

A: A: Opportunity Corridor will not be successful, similar to other projects within the City (Euclid Corridor, I-271 Express Lanes, flats redevelopment).

A: A: A: No expectations for the future since resident's homes, neighborhoods and safety have been taken away.

Fairfax Community Meeting

A neighborhood meeting for the Opportunity Corridor Study was held on Thursday, November 12, 2009. The purpose of this meeting was to present the project to the Fairfax community. The meeting was held at the Langston Hughes Center, 2390 East 79th Street, Cleveland, Ohio 44104, and is located within the Fairfax neighborhood but slightly outside of the study area boundary. The Center is located along bus lines served by both Woodland Avenue and E.79th Street. This Center is the home to Senior Outreach Services, which helps seniors and their families improve their health and quality of life through recreational and educational services, and the Cleveland Clinic's Community Health Outreach Center, a medical student-run health clinic. Therefore, this is a well known landmark in the Fairfax community and viewed as a safe and inviting location by the Fairfax residents. Prior to being located in Langston Hughes Center, Senior Outreach Services was located near E.105th Street in the study area and is still well attended by residents who live in the project study area. The following sections summarize the activities that were completed prior to, during, and subsequent to that meeting.

Advertising

Advertising for this community meeting was done via flyers. Flyers were distributed by Fairfax Renaissance Development Corporation with the community newsletter to all residents who live within the defined community benefit area for the Opportunity Corridor project. These newsletters are hand delivered to all residents in Fairfax quarterly and 1,000 of the newsletters were delivered with flyers.

Community Meeting

Thirty-four individuals attended the community meeting held in Fairfax at the Langston Hughes Center. The doors to the meeting were opened at 5:30 PM to allow attendees to browse exhibits and review information about the project. At 6:00 PM, individuals from the City of Cleveland, Fairfax Development Corporation and HNTB provided an overview of the study process, the goals and objectives that had been developed by the Steering Committee, a summary of the information gathered to date, and the conceptual alternatives. After the presentation a breakout session was held where the meeting attendees broke into small groups with members of the project team.

This gave the attendees an opportunity to ask specific questions about the project and also gave the Steering Committee an opportunity to ask residents questions about their community. The Steering Committed collected data about the residents of each attendee and also collected information about the resources within the community of Fairfax.

Public Comments

Public comments about the Opportunity Corridor Study were collected at the stakeholder meeting. The public was given the opportunity to ask question to members of the Steering Committee at the meeting and was also given a written comment sheet. Following the meeting, the public was allotted two weeks to submit comments about the project in order to be included in the summary for the meeting. People who attended the meeting were encouraged to submit comments at the meeting or via the mail using the self-mailer form included in their handout with pre-paid postage.

The main themes of the residents' comments were concerns over relocation and concern about how the local neighborhoods will benefit from the project. As a result of these comments the federal relocation process has been incorporated into the presentations for the Step 5 public meetings. The project team also continued to work to avoid and minimize these impacts during the development of alignment details in Step 5. Economic development and workforce development efforts are being performed by the city of Cleveland. If development occurs, it could create more local jobs in both the short-term and the long-term. Constructions jobs would be created to build the Boulevard itself, and future development would provide construction and permanent job opportunities. The Boulevard design is also meant to encourage community cohesion and revitalize

the surrounding neighborhoods by making it a more multi-modal environment that includes green and aesthetically pleasing design elements. Public comments helped to formulate the process for the next set of meeting times and locations and meeting content. The specific oral comments, and written questions considered with answers provided on the returned comment sheets are provided below.

Oral Questions/Comments

- Where is the building on Cedar that FRDC is working on and what is occupying it?
- Is the roadway going to be like Euclid Corridor and cut the residents off so they don't have through access?
- What is the timeline?
- What are the types of future jobs?
- How will the people in the community have access to these future jobs?
- Have people who may be impacted been approached? Have these people been asked if they want to move because some people may not be interested in being bought out?
- What consideration is being given to residents left in the areas where proposed growth is?
- What will the lanes be along the corridor? Especially along East 105th Street.
- What are the benefits to our community? The Cleveland Clinic has never reached out to our neighborhood, how will this be different? What about training facilities in Ward 6?
- How do you gauge if the No-Build alternative should move forward? This should be put on the ballot for a Democratic vote.

Written Comments

The written comment sheet contained two different sets of questions. The first set of questions asked about meeting scheduling so that the steering committee can best align public involvement activities to meet the general needs of the stakeholders. A second series of questions was also developed to better understand community assets and concerns. The information gathered by these questions allows the Steering Committee to understand the role that carious modes of transportation play within the community and how transportation investments could affect this role.

Scheduling

Q: What location would be convenient for you to attend a meeting?

A: Fairfax

A: A: A: A: Langston Hughes Center

A: Quincy, Fairfax, Langston Hughes Center

Q: What time of day or night would be convenient for you to attend a meeting?

A: A: A: A: Evening

A: Afternoon

A: 11:00 AM – 1:00 PM

Q: What day of the week would be convenient for you to attend a meeting?

A: Monday, Tuesday, Thursday

A: Any day during the week

A: Thursday

A: Wednesday

A: A: Any Day

Community

Q: What do you like most about your neighborhood?

A: Historic sites and new home developments. Close to University Circle , Case Western Reserve University, Museums.

A: Nothing.

A: The new Quincy Place because it helps people in need.

A: Location.

A: Good location to reach any part of the City. Close to bus, rapid, hospitals, mall freeway, stores, church, etc.

A: Well is use to be a beautiful neighborhood, but now it's really just drug infested crack houses.

Q: What do you like least about your neighborhood?

A: Depreciation, school systems, limited business growth.

A: A: A: A: The vacant lots.

A: Vacant lots, unlighted areas are unsafe, girls standing on corners, police response.

Q: How long have you lived in your neighborhood?

A: Have been working in the community for 10 years.

A: 61 years.

A: Since 1985.

A: 65 years.

A: 25 years.

A: Family has lived in area for 38 years.

Q: What is your biggest obstacle to get to the grocery store, shopping, doctor, church or other activity?

A: Bus line.

A: The distance, none in the immediate community of Arthur, Hudson, Frank, Quebec.

A: There are no close stores, you have to drive everywhere.

A: A: A: No obstacles

Q: What are the most important improvements that need to be made to the neighborhood?

A: Streets, vacant lots, new small businesses.

A: A: Rebuilding or improving the neighborhood.

A: Police clean up.

A: Tear down subpar buildings.

A: Rehab vacant houses.

Business Coordination Meeting

A Business Coordination meeting for the Opportunity Corridor Study was held on Tuesday, December 8, 2009. The purpose of this meeting was to present the project specifically to the area's local business community. This meeting was held in the same location as the daytime public meeting, the Cleveland Playhouse, 8500 Euclid Avenue, Cleveland, Ohio 44106. It was chosen for many of the same reasons as the public meeting. Other locations were considered, such as at a local business such as Orlando Baking Company, however they were dismissed due to the space restrictions and the view that some businesses may not be seen as neutral ground. The following sections summarize the activities that were completed prior to, during, and subsequent to that meeting.

Advertising

Advertising for this community meeting was done via flyers. Flyers were mailed to all businesses within the defined community benefit area for the Opportunity Corridor project.

Business Meeting

Thirty-seven individuals attended the business coordination meeting representing 20 local businesses. Of the 20 businesses eight of them are directly within the project study area, seven within in the community benefit area and five close to the project area. The doors to the meeting were opened at 9:30 AM to allow attendees to browse exhibits and review information about the project. At 10:00 AM, individuals from the Greater Cleveland Partnership, City of Cleveland, HNTB provided an overview of the study process, the goals and objectives that had been developed by the Steering Committee, a summary of the information gathered to date, and the conceptual alternatives. After the presentation a formal question and answer session was held where attendees had the opportunity to ask members of the steering committee questions regarding the project.

Public Comments

Public comments about the Opportunity Corridor Study were collected at the business coordination meeting. Business owners and representatives were given the opportunity to ask question to the project team and was also given a written comment sheet. Following the meeting, the public was allotted two weeks to submit comments about the project in order to be included in the summary for the meeting. People who attended the meeting were encouraged to submit comments at the meeting or via the mail using the self-mailer form included in their handout with pre-paid postage. A copy of the Public Meeting #1 handout and comments sheet were mailed to all businesses within the study area that did not attend the meeting.

The business owners' concerns focused mainly on the relocation and construction process. The businesses that may need to be relocated wanted to be kept informed on the acquisition process as well as the timeline for determining a final alignment alternative so they can plan accordingly. Businesses within the study area that will not need to be relocated were concerned about access for their customers during construction of the Boulevard. ODOT will continue to keep all stakeholders informed on the alternative selection and acquisition processes and schedules as the project moves forward. Maintenance of traffic during construction will be evaluated in more detail in Step 6 of the ODOT Project Development Process. Overall, there were no comments heard that would change which alternatives were recommended for further study. Business stakeholder comments also helped to formulate the process for the next set of meeting times and locations and content. The specific oral comments and written questions considered with answers provided on the returned comment sheets are provided below.

<u>Oral Questions/Comments</u>

- What will happen with the traffic volumes at the intersection of East 55 and I-490?
- What would the time line be for (business) relocation?
- What drives the decision on what the route of the corridor will be, specifically the middle section of the two alternatives? No knowing where this is going to be prohibits future business planning.
- How will you evaluate adverse affects due to constructions if business is not being taken, but needs to sustain through construction (traffic, etc.)?

<u>Written Comments</u>

The written comment sheet contained two different sets of questions. The first set of questions was also developed to better understand community assets and concerns. A second series of questions asked about meeting scheduling so that the steering committee can best align public involvement activities to meet the general needs of the stakeholders. The information gathered by these questions allows the Steering Committee to understand the role that carious modes of transportation play within the community and how transportation investments could affect this role.

Community

Q: Where is your business located?

A: Bruder Inc. – Woodland between E 89th Street and E 93rd Street

A: North Coast Paving Co. – Woodhill and Quincy

Q: Describe your business and your markets?

A: Building materials sales – contractors and retail.

A: Excavation, grading, and asphalt paving contractor.

Q: Generally how do your employees travel to work?

A: 90% car and 10% walk

A: 100% car

Q: What mode of transportation do you believe has insufficient access to your business?

A: A: None

Q: Do you know what percentage of your employees live around your business? If so, what is the percentage?

A: 20%

A: 50%

Q: Are you having any difficulty moving your goods or products to and from your business?

A: A: No

Q: Are there any access improvements you or your employees would benefit from as a result of the Opportunity Corridor Project?

A: It depends on where it is located

A: Yes. It would make it much easier to get to/from the interstate.

Q: Are there any supporting or other types of businesses that you could benefit from if they locate near your business?

A: Yes. Increase contractor sales.

Q: Do you have any expansion plans in the future?

A: Yes. Outdoor displays.

A: No

Q: Are there any design aspects of the proposed roadway improvement that are particularly important to you?

A: Neighborhood/business area access, corridor/street design/art/etc, cross-street locations

A: Cross-street location (access to/from Quincy)

Q: Are raw materials delivered to your business?

A: Yes, via truck

Q: What modes of transport do you use to distribute your products?

A: Yes, via truck

Q: What are the most critical aspects of your materials supply and distribution chain we need to be aware of for our work on the Opportunity Corridor Project?

A: If our customers can't get to us easily during construction you will ruin us.

Scheduling

Q: What location would be convenient for you to attend a meeting?

A: Cleveland Play House

Q: What time of day or night would be convenient for you to attend a meeting?

A: Mid-day

Q: What day of the week would be convenient for you to attend a meeting?

A: Monday through Friday

University Circle Community Meeting

A neighborhood meeting for the Opportunity Corridor Study was held on Tuesday, January 26, 2010. The purpose of this meeting was to present the project to the University Circle community. The meeting was held at the Judson Manor Ballroom, 1890 East 107th Street, Cleveland, Ohio 44106, and is located within the University Circle neighborhood and at the northern end of the study area. Judson Manor has been the site of many past public meetings hosted by University Circle Inc. and therefore is a well-know location for residents and employees in University Circle. There was ample free parking adjacent to the meeting site to fit the size anticipated for a community meeting, as well as, close proximity to a GCRTA bus line running along E.105th Street. Most of the other sites within the study area with space large enough to host the community meeting are Cleveland Clinic owned facilities and not viewed as accessible for the general public and therefore were not chosen. The following sections summarize the activities that were completed prior to, during, and subsequent to that meeting.

Advertising

University Circle Incorporated distributed an email to the UCI institutional member marketing association, media contacts, UCI employees, and neighborhood and employee stakeholders that have requested information on public meetings in the Circle. The email advertisement was also distributed to all of the neighboring CDC directors who were asked to share the information with their constituents. UCI also sent an email to CWRU's Director of the Center for Community Partnership who then forwarded the information to neighborhood residents.

Copies of the flyers were also posted at all of the major multi-family residential buildings within the neighborhood including Abington Arms, Commodore Place, Park Lane Villa, Judson Manor, and University East.

Community Meeting

Thirty-five individuals attended the community meeting held in University Circle in the Ballroom at Judson Manor. The doors to the meeting were opened at 5:30 PM to allow attendees to browse exhibits and review information about the project. At 5:45 PM, individuals from Greater Cleveland Partnership, the City of Cleveland and HNTB provided an overview of the study process, the goals and objectives that had been developed by the Steering Committee, a summary of the information gathered to date, and the conceptual alternatives. After the presentation a breakout session was held where the meeting attendees broke into small groups with members of the project team.

This gave the attendees an opportunity to ask specific questions about the project and also gave the Steering Committee an opportunity to ask residents questions about their community. The Steering Committed collected data about the residents of each attendee and also collected information about the resources within the community of University Circle.

Public Comments

Public comments about the Opportunity Corridor Study were collected at the community meeting. The public was given the opportunity to ask question to members of the Steering Committee at the meeting and was also given a written comment sheet. Following the meeting, the public was allotted two weeks to submit comments about the project in order to be included in the summary for the meeting. People who attended the meeting were encouraged to submit comments at the meeting or via the mail using the self-mailer form included in their handout with pre-paid postage.

Resident's comments focused mainly on providing better access and mobility to the area by creating a more multi-model infrastructure, as well as encouraging a project design that would facilitate economic development opportunities. The proposed boulevard is designed to include bike and pedestrian facilities that would improve multi-modal access and mobility. ODOT's recommended alternatives for further study in Step 5 also provide greater opportunity for economic development. Public comments also helped to formulate the process for the next set of meeting times and locations. The specific oral comments and written questions considered with answers provided on the returned comment sheets are provided below.

Oral Questions/Comments

- What is the difference between a highway and a boulevard?
- What about marginal roads?
- What is the design speed?
- How will this effect mobility, speed, and access to locations in the study area?
- Will it quicken access to University Circle?
- Will it save time?
- Is there support of public infrastructure within the circle? (for current institutions)
- Are RTA station effected directly by the Opportunity Corridor?
- What research has been done or example projects have been looked at or studied that has brought economic development? For this amount of money, what existing studies show building infrastructure brings economic development?
- Case study: Minneapolis compared to Cleveland. What were existing conditions before and after the project?
- What drives the demand to use this corridor?
- Is the mobility to the Fairhill area being looked at?
- Is there a website or access to files?
- Can other public comments be posted on the website for others to view?
- How do you pull information off the of Greater Cleveland Partnership website?
- Tudor Arms Hotel is still in the planning phase. Empty right now.
- How are properties being bought, condemned, or demolished in the area? By whom and how?

Written Comments

The written comment sheet contained two different sets of questions. The first set of questions asked about meeting scheduling so that the steering committee can best align public involvement activities to meet the general needs of the stakeholders. A second series of questions was also developed to better understand community assets and concerns. The information gathered by these questions allows the Steering Committee to understand the role that carious modes of transportation play within the community and how transportation investments could affect this role.

Scheduling

Q: What location would be convenient for you to attend a meeting?

A: Anywhere

A: A: A: University Circle

A: A: A: University Circle, Judson Manor

Q: What time of day or night would be convenient for you to attend a meeting?

A: A: A: Evening

A: No preference

A: Early evening

A: A: 5:30 pm

Q: What day of the week would be convenient for you to attend a meeting?

A: Not Tuesday

A: A: A: A: No preference

A: A: Monday, Wednesday, Thursday

A: Tuesday, Wednesday, Friday

A: Tuesday, Wednesday

Community

Q: Do you live, work and/or play in the Study Area?

A: I work and "play" in the study area. I travel these routes from E. 55th Street and I-490 at least twice a day.

A: Live (6 months), play (all my life)

A: Work (RTA transit development), play (museums and other events)

A: No, I visit often for work.

A: No

A: Live (12 years, work (1 year)

A: Work (6.5 years). Kids go to high school and college here. Use museums, would like to shop here.

Q: What do you like most about the University Circle neighborhood?

A: Access to culture

A: Stimulation and choices, culture, food, mix of people, music choices, park land, old trees and easy street crossings.

A: Diversity of usages, residents and cultures. There is something for everyone. It is a very energetic area, especially with college activities and students.

A: The beauty of it, its green space, monumental architecture, and convenient location.

A: They cultural facilities, my gym.

A: Safety

A: Convenient. Cultural

A: Beautiful building, landscape, lots of people, culture, few, but good restaurants.

Q: What do you like least about the University Circle neighborhood?

A: Congestion in the University Circle neighborhood without regarding the number of routes into University Circle. There is good access already. There is not congestion @ I-490 and E. 55th Street. I am there at least twice a day.

A: Need litter cleanup and new sculpture around the art museum. The current one looks old fashion.

A: Lack of cohesive way finding between transportation modes, although it has improved significantly.

A: Traffic level and parking

A: Early morning automobile traffic

A: A: Traffic

A: Not enough high end housing or permanent residents. Need shopping areas. Need shared shuttles to link transportation modes.

Q: How do you typically travel within the Study Area?

A: A: A Car

A: A: Car and walk

A: Rail and Car (for personal use on the weekends)

A: Car, Health Line, Red Line.

A: RTA Rapid

Q: What is your biggest obstacle when traveling to shopping, dining, doctor, church or other activity?

A: Parking

A: Distance. Perhaps a super market would be helpful and a few neat high style stores. We are a little tacky.

A: Ability to walk between locations that are not in the core University Circle area. Crossing some of the major streets, such as Carnegie, are too wide for pedestrian comfort.

A: The destinations are spread out.

A: Time

A: A: Traffic

A: None

Q: What are the most important improvements that need to be made to the University Circle neighborhood?

A: Development of existing access areas to the circle. We need better development of existing needs not new ones.

A: Safety is always a concern. More outreach from the institutions here, particularly CWRU.

A: Higher coordination/engagement with adjacent neighborhoods such as Hough, Fairfax, etc.

A: Enhance access to public transit. Have institutions work together.

A: Continue adding housing

A: Getting in and out, safety.

A: More shops, residents, and housing to attract people

St. Hyacinth Community Meeting

A neighborhood meeting for the Opportunity Corridor Study, co-hosted by Slavic Village Development Corporation and the neighborhood block group, was held on Thursday, January 28, 2010. The purpose of this meeting was to present the project to the St. Hyacinth community. The meeting was held at Edgewood Park, 3215 East 55th Street, Cleveland, Ohio 44127, and is located within the St. Hyacinth neighborhood and slightly south of the project study area. Since the St. Hyacinth Church has been closed, the study area in the St. Hyacinth neighborhood lacks locations with parking and meeting space to hold a community meeting. Edgewood Park is a newer community facility with free adjacent parking well known to the residents and along several GCRTA bus lines. The meeting date and time was chosen in coordination with and was a part of a regularly scheduled St. Hyacinth Community Coalition Block Group meeting. The following sections summarize the activities that were completed prior to, during, and subsequent to that meeting.

Advertising

Advertising for this community meeting was done via flyers. Community leaders delivered flyers door to door to residents who live in the north part of St. Hyacinth within the study area for the Opportunity Corridor project. In addition, approximately 550 flyers were sent via mail to the residents within the community benefit area. The meeting was also advertised on the front page of the free weekly newspaper, *Neighborhood News*. The meeting was also on the monthly community calendar which is widely distributed to community leaders.

Community Meeting

Thirty-six individuals attended the community meeting held in St. Hyacinth at Edgewood Park. The doors to the meeting were opened at 6:00 PM to allow attendees to browse exhibits and review information about the project. At 6:15 PM, individuals from Greater Cleveland Partnership, the City of Cleveland and HNTB provided an overview of the study process, the goals and objectives that had been developed by the Steering Committee, a summary of the information gathered to date, and the conceptual alternatives. After the presentation a breakout session was held where the meeting attendees broke into small groups with members of the project team.

This gave the attendees an opportunity to ask specific questions about the project and also gave the Steering Committee an opportunity to ask residents questions about their community. The Steering Committed collected data about the residents of each attendee and also collected information about the resources within the community of St. Hyacinth.

Public Comments

Public comments about the Opportunity Corridor Study were collected at the community meeting. The public was given the opportunity to ask question to members of the Steering Committee at the meeting and was also given a written comment sheet. Following the meeting, the public was allotted two weeks to submit comments about the project in order to be included in the summary for the meeting. People who attended the meeting were encouraged to submit comments at the meeting or via the mail using the self-mailer form included in their handout with pre-paid postage.

The overarching themes of the residents' comments were concerns over relocation and concern about neighborhood impacts, access, project timelines and development (job) opportunities for the neighborhood. An additional alternative was developed within this community to provide full access for a grade separation at E. 55th Street. Project timelines will continue to be incorporated into future public involvement activities. Construction and permanent job opportunities could be created as referenced in the Fairfax Community meeting summary of this document. Public comments also helped to formulate the process for the next set of meeting times and locations and content. The specific oral comments and written questions considered with answers provided on the returned comment sheets are provided below.

<u>Oral Questions/Comments</u>

- There are a lot of vacant properties. How does this interface with alignments and minimizing impacts?
- How is project going to be paid for? What is the schedule?
- What is the timeline for Step 8 through construction?
- Will anything be done about the noise for current residents during construction and after the roadway is built?
- What is the width of the roadway?
- How will property values be determined?
- What type of traffic will be using the roadway?
- What should we do about investment of current personal properties?
- Are there any Slavic Village investment opportunities?
- Reinvesting within the community is important to the residents.

Written Comments

The written comment sheet contained two different sets of questions. The first set of questions asked about meeting scheduling so that the steering committee can best align public involvement activities to meet the general needs of the stakeholders. A second series of questions was also developed to better understand community assets and concerns. The information gathered by these questions allows the Steering Committee to understand the role that carious modes of transportation play within the community and how transportation investments could affect this role.

Scheduling

Q: What location would be convenient for you to attend a meeting?

A: A: A: A: Edgewood Park

A: A: A: No preference

A: Central Avenue/East 71st Street (Jokes)

A: Close to St. Hyacinth/Broadway

Q: What time of day or night would be convenient for you to attend a meeting?

A: A: A: A: Evening

A: A: 6:00 PM

A: Early evening

A: Late afternoon

A: No preference

Q: What day of the week would be convenient for you to attend a meeting?

A: Wednesday, Thursday

A: A: A: No preference

A: Monday

A: Thursday, Tuesday, Monday

A: Tuesday, Thursday

A: Saturdays

A: Thursday

Community

Q: Do you live, work and/or play in the Study Area?

A: I live within a 1/4 mile of the boundary of the study area.

A: A: A: Lived on Butler Avenue for 15 years

A: Live and Work (4 years). Our building is our home and work space/office.

A: Work (14 years), live (4 years)

A: 14 year resident, 2 year WCF (non-profit)

A: Moved here in 1999

A: Have lived here for 2.5 years

Q: What do you like most about the St. Hyacinth neighborhood?

A: It is a nice pocket neighborhood. Has a nice park attracting artists at Hyacinth Lofts. Strong neighbors and block clubs.

A: Different cultures get along well. Close proximity to shopping and freeway.

A: Diverse cultures, accessibility, growing community (resurgence).

A: Friends and convenience to travel

A: Convenient location, Slavic Village potential, diversity (people, culture, etc)

A: Close to most places.

A: Historical, family, and social services, vibrant neighborhood.

A: The location to downtown and surrounding areas

A: Easy access to freeways and downtown Cleveland

Q: What do you like least about the St. Hyacinth neighborhood?

A: Abandoned industrial sites, bordered by several eyesore scrap companies, safety, constant dirt on East 55th from the scrap yards, very little retail or services.

A: Gangs moving in, bad press in the media, people breaking into houses to get copper.

A: Being in limbo about the future of our neighborhood, the closing of St. Hyacinth Church which was a cornerstone to our community.

A: Garbage

A: Scrap yards, dirty, bad neighbors, eyesore, and crime magnet to "scrappers".

A: As it ages, our area seems to receive less attention from city services like RTA, etc.

A: Slavic Village and outsiders who do not care, only about money, and live in fantasy visions.

A: No community mobility, streets unsafe, improper street lighting, too many trucks using main roads (East 65th Street)

A: The property values are in the toilet. Investors don't want to buy them.

Q: How do you typically travel within the Study Area?

A: Living on East 55th Street, I use I-490 to get everywhere. Use East 55th Street to get to University Circle via Carnegie or Euclid Avenue. There is no easy way to get to museums, Little Italy, or Cleveland Heights.

A: A: A: A: A: Car

A: St. Hyacinth local streets, East 65th Street, Broadway, East 55th Street, I-490, I-77

A: Car and walk

A: Bicycle and bus

Q: What is your biggest obstacle when traveling to shopping, dining, doctor, church or other activity?

A: No issues going west via I-490, but difficult to get to University Circle, East 55th Street north of Gran very congested, lots of lights, doesn't feel safe.

A: None

A: The closing of Bower Avenue

A: Snow and the lack of removal

A: There is nothing in the Hyacinth local area. I must go out of the local area to access any of these destinations. There are lots of places to the west to access. It is longer to go to east to get to University Circle area, etc.

A: Must drive, few amenities like stores, gas stations, restaurants.

A: Lack of bus routes and cost of fares

A: Trucks parked at Empire Plow blocking roadway.

A: Snow, traffic congestion at Broadway and East 55th Street, northbound East 55th Street congestion.

Q: What are the most important improvements that need to be made to the St. Hyacinth neighborhood?

A: Find re-use for closed Church, get rid of scrap yards, vacant lo re-use, rehab new homes, build off of Hyacinth Lofts, do off-road bike trail to Morgana Run Trail.

A: More police surveillance, improve lots and empty areas, try to keep the Churches that we still have left.

A: Retail shopping, improved roads.

A: Removal of empty, run down houses.

A: Clean up scrap yard mess. Demolish vacant/abandoned houses. Bring in grants for gardens and housing development.

A: This area was once very viable because of close proximity to jobs. Effort must be made to connect current resident to work, transportation, etc.

A: Utilities, industrial presence, employment opportunities, community support systems.

A: More traffic enforcement for speeders.

A: Incentives to promote local business development, jobs nearby to support local residents, more law enforcement presence, my house has become a fortress.

Kinsman Community Meeting

A neighborhood meeting for the Opportunity Corridor Study was held on Wednesday, February 3, 2010. The purpose of this meeting was to present the project to the Kinsman community. The meeting was held at Elizabeth Baptist Church, 8005 Holton Avenue, Cleveland, Ohio 44104, which is located in the center of the Kinsman neighborhood within the project study area and immediately adjacent to the residential areas that may be impacted by the project alternatives. A church was chosen due to its reputation as a safe and inviting location within the community. The meeting was held on a Wednesday when weekly bible study was taking place in the main church. It was anticipated that some bible study attendees would come to the community meeting after bible study since they were in the same building. The Church has ample free adjacent parking as well as GCRTA bus service along E.79th Street. There are very few other locations within the project study area within the Kinsman neighborhood that could hold a meeting of this size. The following sections summarize the activities that were completed prior to, during, and subsequent to that meeting.

Advertising

Advertising for this community meeting was done via flyers. Flyers were mailed to approximately 850 residents who live within the defined community benefit area for the Opportunity Corridor project. Many of these flyers were returned as undeliverable due to vacant houses and/or lots within the area. In addition to the mailing, Burten Bell Carr Development Corporation (BBC) mailed flyers to 300 residents living in the Community Apartments located on Woodland Avenue. BBC also had flyers posted and available at their office located on Kinsman.

Community Meeting

Sixty-one individuals attended the community meeting held in Kinsman at the Elizabeth Baptist Church. The doors to the meeting were opened at 6:00 PM to allow attendees to browse exhibits and review information about the project. At 6:15 PM, individuals from Greater Cleveland Partnership, the City of Cleveland and HNTB provided an overview of the study process, the goals and objectives that had been developed by the Steering Committee, a summary of the information gathered to date, and the conceptual alternatives. After the presentation a formal question and answer session was held. Due an extended question and answer session, there was not enough time to break out into small groups to perform the map exercise and the CSS exercise.

Public Comments

Public comments about the Opportunity Corridor Study were collected at the community meeting. The public was given the opportunity to ask question to members of the Steering Committee at the meeting and was also given a written comment sheet. Following the meeting, the public was allotted two weeks to submit comments about the project in order to be included in the summary for the meeting. People who attended the meeting were encouraged to submit comments at the meeting or via the mail using the self-mailer form included in their handout with pre-paid postage.

Again, the main themes of the residents' comments were concerns over relocation and concern about how the local neighborhoods will benefit from the project. As a result of these comments the federal relocation process as been incorporated into the presentations for the Step 5 public meetings. The project team also continued to work to avoid and minimize these impacts during the development of alignment details in Step 5. Economic development and workforce development efforts are being performed by the city of Cleveland. If development occurs, it could create more local jobs in both the short-term and the long-term. Constructions jobs would be created to build the Boulevard itself, and future development would provide construction and permanent job opportunities. The Boulevard design is also meant to encourage community cohesion and revitalize the surrounding neighborhoods by making it a more multi-modal environment that includes green and aesthetically pleasing design elements. Public comments helped to formulate

the process for the next set of meeting times and locations and meeting content. The specific oral comments and written questions considered with answers provided on the returned comment sheets are provided below.

<u>Oral Questions/Comments</u>

- Why spend $300 million on new road when you could fix up existing roads?
- We are no closer today then we were in 2004. We are on hold with our properties with investing on improvements.
- If you build the road, do you have guarantee for any businesses ready to locate here? What kind of jobs will they produce?
- If you don't know where the road is going, why not use the money to fix up houses instead?
- Opportunity Corridor is designed for out-of-town to University Circle. House values are low according to appraisals. Investments in house are not being accounted for in appraisals.
- One residents who lives at East 75th Street/Kinsman lives close to work and school. Just a roadway isn't enough. We don't want to give up our neighborhood.
- I don't have a problem getting to University Circle today. Construction and truck traffic will disturb houses that will stay.
- Hope jobs would be available to local residents.
- How will people choose their relocated house? How will they pay taxes on a higher value house?
- Why can't the money be reinvested in the neighborhood revitalization instead

<u>Written Comments</u>

The written comment sheet contained two different sets of questions. The first set of questions asked about meeting scheduling so that the steering committee can best align public involvement activities to meet the general needs of the stakeholders. A second series of questions was also developed to better understand community assets and concerns. The information gathered by these questions allows the Steering Committee to understand the role that carious modes of transportation play within the community and how transportation investments could affect this role.

Scheduling

Q: What location would be convenient for you to attend a meeting?

A: Any, with parking

A: Where Ward 5 meetings are held on E. 55th Street

A: Southeast side

A: A: Kinsman Area

A: Broadway and/or Kinsman

A: Mount Sinai Baptist Church (corner of East 75th Street and Woodland Avenue)

A: Any Church, Mount Sinai Baptist Church

A: Lower Kinsman Area

Q: What time of day or night would be convenient for you to attend a meeting?

A: A: After 5:00 PM

A: After 6:30 PM

A: A: A: After 6

A: Night

A: Evenings

A: No preference.

Q: What day of the week would be convenient for you to attend a meeting?

A: A: A: No preference

A: Friday

A: Tuesdays

A: A: Monday, Thursday

A: Monday, Tuesday

A: Tuesday, Thursday

Community

Q: Do you live, work and/or play in the Study Area?

A: Resident for 33 years. I'm 50 years old, please hurry!

A: No. I work downtown.

A: No.

A: I work in the area as the Director of Resident Services for Rainbow Terrace.

A: I live outside of Kinsman area

A: A: Yes, since 1953

A: Yes, I am retired. I lived here 51 years and worked rail at Grand Avenue RTA

A: Most of my life (50 to 60 years). Raised three children and grandchildren.

Q: What do you like most about the Kinsman neighborhood?

A: Before Bridge Port, nothing.

A: The park, Zelma George for skating, etc., Walgreens.

A: At one time it was a rich and thriving area.

A: The potential and the residents who take pride in this area.

A: Historical houses, churches, and buildings

A: Great location to downtown Cleveland. Good street to be on. Close to Garden Valley

A: It's quiet after rush hour. Bus line on time, folks are nice to each other. No gangs around her. A lot of churches.

A: My family is still here. This is my birthplace.

A: Proximity to transportation, hospitals, church, schools, shopping and highways.

Q: What do you like least about the Kinsman neighborhood?

A: No major grocery stores, drugstores. I would love to see a strip mall like Buckeye Plaza and Church Square. I have 9 grandchildren but only one nice playground.

A: Old skating rink, no bowling alley, not enough retail, no bike trails

A: The deterioration of the buildings, lighting of the streets are poor, poor qualities of stores.

A: The vacant land

A: Crime and drugs

A: No jobs for the dwellers. Everyone needs to work and only Orlando's bakery is not employing Black folk there.

A: No jobs for the residents. We need to work to fix up the old home, not all are bad. No stores like Steelyard Commons.

A: Gangs, drugs, people hanging on corners, no jobs, no restaurants, no banks, no decent Community Center or Recreation Center.

A: Neighborhood's slow to rapid decline, increasing criminal activity from low income residents and visitors that do not reside in the area.

Q: How do you typically travel within the Study Area?

A: Car. I would love to walk but no sidewalks.

A: East 55th Street, Quincy Avenue, Woodland Avenue, Cedar Avenue, East 93rd Street, East 79th Street, East 30th Street, Buckeye Avenue.

A: Moving straight to downtown or turning on East 79th Street to go north or south.

A: Via streets due to the congested highways (East 55th and I-490)

A: East 55th Street

A: Bus or car. We've always owned a car to shop and get around town.

A: Bike during the summer. Take the bus down town because it's cheaper than paying for parking tickets, etc.

A: A: Car

Q: What is your biggest obstacle when traveling to shopping, dining, doctor, church or other activity?

A: Travel too far. I really hate having to shop in suburbs.

A: Everything is fine via use of a vehicle but not by RTA.

A: I personally shop in other areas.

A: There is no freeway besides East 55th Street

A: None of these amenities are nearby

A: Not much in this proximity now. We need to get jobs and bus back in this area. Church is okay. There is nothing else here now.

A: Getting out of the driveway. The side streets red light is taken away now, traffic is flowing all day long in both directions.

A: The traffic hold ups, no turning signals, long length.

A: Overall safety from thugs. Frequently, police have to pursue criminals through residential yards.

Q: What are the most important improvements that need to be made to the Kinsman neighborhood?

A: Rebuilding. Some people do not like change, but you can't and won't please everyone. I love change.

A: More retail, more retail, more activities to do, more necessities, steelyard helped out.

A: Businesses, jobs, increase or brighten lights. Youth/young adult training facilities.

A: More economic development and usage of the vacant land.

A: Housing, businesses

A: Small businesses, grocery store, strip mall like Mid-Town on East 55th Street, hardware store, factories, Lowes, etc.

A: Small business, jobs, companies, industrial, or a strip mall to help our kids and Garden Valley grow. A theater house.

A: Everything and then some

A: Safety, more consideration and efforts should be implemented to encourage youths pride in the areas that they reside and build positive self esteem.

Buckeye Community Meeting

A neighborhood meeting for the Opportunity Corridor Study was held on Tuesday, March 9, 2010. The purpose of this meeting was to present the project to the Buckeye community. The meeting was held at Blessed Hope Missionary Baptist Church, 8804 Buckeye Road, Cleveland, Ohio 44104, and is located in the Buckeye neighborhood within the project study area and immediately adjacent to the residential areas that may be impacted by the project alternatives. Due to the close proximity to the Kinsman neighborhood, there was some overlap on attendees for the Kinsman and Buckeye meetings. A church was chosen due to its reputation as a safe and inviting location within the community. The Church has ample free adjacent parking as well as GCRTA bus service along Buckeye Avenue. There are very few other locations within the project study area within the Buckeye neighborhood that could hold a meeting of this size. The Ken Johnson Rec Center was not considered as a location for this community meeting because of the views that the rec center is tied to the City and the Councilman and not a neutral site. The following sections summarize the activities that were completed prior to, during, and subsequent to that meeting.

Advertising

Advertising for this community meeting was done via flyers. Flyers were mailed to approximately 150 residents who live within the defined community benefit area for the Opportunity Corridor project. Flyers were also delivered to residents in Garden Valley housing units, King Kennedy high rise buildings and Phoenix development. In addition to the direct mail, Buckeye Area Development Corporation (BADC) dropped off flyers at the churches within the study area the week before the meeting and asked that the pastors communicate the upcoming meeting. All flyers were passed out five days prior to the meeting and were placed in the door, on the mailbox, on wherever else the flyer could be attached. When possible, the BADC knocked on doors to try to speak with the homeowner if they were available. BADC also informed their board members and Councilman Kenneth Johnson about the meeting and asked them to spread the word. The day before the meeting, Joe Dennis, a BADC board member and resident member of the OC Steering Committee, hand delivered flyers to homes in the Lower Buckeye area.

Community Meeting

Sixty-nine individuals attended the community meeting held in Buckeye at the Blessed Hope Missionary Baptist Church. The doors to the meeting were opened at 6:00 PM to allow attendees to browse exhibits and review information about the project. At 6:15 PM, individuals from Greater Cleveland Partnership, the City of Cleveland and HNTB provided an overview of the study process, the goals and objectives that had been developed by the Steering Committee, a summary of the information gathered to date, and the conceptual alternatives. After the presentation a formal question and answer session was held. Due an extended question and answer session, limited time was available to break out into small groups to perform the map exercise, the CSS exercise, and complete the questionnaire. Only a few attendees stayed to complete these exercises.

Public Comments

Public comments about the Opportunity Corridor Study were collected at the community meeting. The public was given the opportunity to ask question to members of the Steering Committee at the meeting and was also given a written comment sheet. Following the meeting, the public was allotted two weeks to submit comments about the project in order to be included in the summary for the meeting. People who attended the meeting were encouraged to submit comments at the meeting or via the mail using the self-mailer form included in their handout with pre-paid postage.

The main themes of the residents' comments were concerns over relocation and concern about how the local neighborhoods will benefit from the project. As a result of these comments the federal relocation process has been incorporated into the presentations for the Step 5 public meetings. The project team also continued to work to avoid and minimize these impacts during the

development of alignment details in Step 5. Economic development and workforce development efforts are being performed by the city of Cleveland. If development occurs, it could create more local jobs in both the short-term and the long-term. Constructions jobs would be created to build the Boulevard itself, and future development would provide construction and permanent job opportunities. The Boulevard design is also meant to encourage community cohesion and revitalize the surrounding neighborhoods by making it a more multi-modal environment that includes green and aesthetically pleasing design elements. Public comments helped to formulate the process for the next set of meeting times and locations and meeting content. The specific oral comments and written questions considered with answers provided on the returned comment sheets are provided below.

Oral Questions/Comments

- In the fall you said you would have more info by now, but you don't.
- Will jobs begin with demolition through construction?
- We live and have businesses in the area. Where are residents included on the steering committee?
- How will residents get jobs?
- Is this all for Cleveland Clinic and UH to get people from the suburbs to the hospitals?
- Neighborhood will be gone when road comes through.
- How are the elderly going to get loans & mortgages if their homes area taken? What if their homes are already paid for?
- Will our councilmen be at our next meetings to represent the people?
- Miceli's has expansion plans to take large tracts of land. We should be protected as residents who are already here.
- What will you do for the residents?
- There is a "do nothing" attitude in the neighborhood when it comes to fixing roads and houses.
- I've been aware of these plans since the 1970's. How will we qualify for any of the jobs?
- If you take my house, what am I going to do and where am I going to live?
- Is it true that developers are targeting this area because property values are low?

Written Comments

The written comment sheet contained two different sets of questions. The first set of questions asked about meeting scheduling so that the steering committee can best align public involvement activities to meet the general needs of the stakeholders. A second series of questions was also developed to better understand community assets and concerns. The information gathered by these questions allows the Steering Committee to understand the role that carious modes of transportation play within the community and how transportation investments could affect this role.

Scheduling

Q: What location would be convenient for you to attend a meeting?

A: A: A: Any

A: Blessed Hope Church

A: Churches in the area (Blessed Hope, Calvary Hill Apostolic, etc)

Q: What time of day or night would be convenient for you to attend a meeting?

A: A: Any

A: A: Evenings

Q: What day of the week would be convenient for you to attend a meeting?

A: Any

A: Any but Wednesday

A: Wednesday, Thursday, Saturday

A: Friday

Community

Q: Do you live, work and/or play in the Study Area?

A: I have lived in the area from 1951 to 1956 and again since 2002.

A: No.

A: Yes, land in the area

A: I have rental property

A: Calvary Hill Church of God in Christ has been a presence in the community for 100 years.

Q: What do you like most about the Buckeye neighborhood?

A: Personal history, everything close by

A: Quiet and history

A: I like the current energy for development of housing and upgrading of schools, libraries, and commercial areas of the Buckeye/Woodland neighborhood.

Q: What do you like least about the Buckeye neighborhood?

A: Bad perception and boarded up houses an empty lots

A: The deterioration of the neighborhood and crime

A: I would hope there would be money and other resources made available to home owners, businesses and Churches for upgrading these structures.

Q: How do you typically travel within the Study Area?

A: Car, walk

A: A: Car

A: E. 93rd or Woodland

A: We travel up and down Buckeye and take Woodland to E. 55th to take I-490. We also take Woodhill to Quincy and E. 105th Street to get to Euclid, Chester, and other northern parts.

Q: What is your biggest obstacle when traveling to shopping, dining, doctor, church or other activity?

A: Pot holes and distance to the interstate

A: A: None

A: The rundown sites, too much traffic, and unkept roadways

A: I don't have any problems traveling. We want to build this as a residential community.

Q: What are the most important improvements that need to be made to the Buckeye neighborhood?

A: Interstate access and smoother roads. Some cosmetic upgrades, light/tech jobs

A: More crack down on the dope dealers and crack heads

A: Businesses

A: Investment in landscaping and the community

A: We need to be able to have resources to improve our homes.

Appendix E Stormwater Summary

Opportunity Corridor

Step 5 Stormwater Summary

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July 15, 2010

URS

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Figures

Introduction

The proposed project consists of a new alignment and improvements of existing facilities to provide a link between the existing I-490 stub at E. 55th Street and the local roadway network near University Circle. Opportunity Corridor is proposed as an access boulevard for University Circle to the Interstate System, in Cleveland, Ohio. The project area is located between the existing I-490 stub at East 55th Street and University Circle. The project study area has been divided into Western, Central, and Eastern sections so that local features can be shown in sufficient detail on the attached figures.

Three alternative alignments are proposed for Opportunity Corridor and are shown on the attached figures (but are not delineated separately on any figures). The alternatives will be hereafter collectively referred to as the "project" and a study area boundary has been established for this Step 5 document. The study area boundary extends up local connector streets and is delineated on the figures attached to this stormwater discussion. It is understood that the selected alternative will be maintained by the City of Cleveland once construction is completed.

Project Study Area Surface Drainage

The entire project study area is highly urbanized and has no extended reaches of natural channels present within or near to the proposed project alignments. The project study area is dominated by the depressed alignment of the Rapid Transit Authority (RTA) Red line tracks which crosses the central portion of the study area and lies along the study area boundary of the western and eastern portions of the project. A depressed section of the Kingsbury Run combined sewer overflow (CSO) system also bisects the central portion of the project area.

Much of the project study area outside of the depressed RTA and Kingsbury Run areas is relatively flat with few channels or ditches present to convey storm water runoff. Generally the western and central portions of the project study area drain towards the west; while the eastern portion of the study area drains to the north (see Figures 1 through 3). These three figures show the existing surface drainage area boundaries in yellow and the main direction or point of concentration of surface water drainage flow within each drainage area with yellow arrows. The surface water drainage areas were delineated within the current ODOT project study area limits and have been labeled DB1 through DB58 as shown on the figures.

The existing surface water drainage system within the project area discharges entirely to a portion of the CSO system maintained in part by both the Northeast Ohio Regional Sewer District (NEORSD) and the City of Cleveland Water Pollution Control (Cleveland WPC). The larger diameter system components such as interceptors and regulators are maintained by the NEORSD, while the smaller local lines that feed the larger components are maintained by the Cleveland WPC.

Northeast Ohio Regional Sewer District System

Combined sewers carry sanitary waste, industrial waste, and storm water runoff in a single pipe. Combined sewers are designed to allow normal, dry weather flow to go to a wastewater treatment plant; however, storm runoff can dramatically increase the volume of water flowing into and through the combined sewers to the treatment plant. Regulator control devices within the combined sewer system allow some of the flow to be diverted, receive no treatment, and overflow into area waterways or Lake Erie to prevent the system capacity of the wastewater treatment plants (WWTP) from being exceeded. The points of discharge of the diverted combined flow are called NEORSD CSO Outfalls (labeled with a blue dot on Figure 4).

The project area is served by CSO systems that contribute flow to both the NEORSD Southerly and Easterly WWTPs and to any CSO outfalls located within those systems. The project area to the west of Buckeye Road is a portion of the Southerly WWTP CSO system and the area to the east of Buckeye Road is a portion of the Easterly WWTP CSO system.

Figure 4 shows the sewersheds of each of the CSO outfalls that are present in the project study area. The sewershed areas for each of the NEORSD CSO outfalls were delineated based on system conveyance network information provided by the NEORSD GIS Department. The limits of these CSO sewersheds show the contributing areas to each CSO. It is understood that a portion of the combined flow from these sewersheds may be directed outside of the sewershed boundaries to one of the CSO outfalls during periods of combined wet weather flow as controlled by the diversion structures in the NEORSD system regulators. It should also be noted that some of the conveyance system pipes overlap along the perimeters of these sewersheds. The sewershed boundaries are controlled by the CSO system components and may not coincide with storm water drainage areas that are controlled by the ground surface topography.

NEORSD CSO system regulators control the diversion of combined sanitary sewer and storm water flows during periods of wet weather. System regulators are important structures for the NEORSD as these structures maintain combined flow through the system and might prove costly or complex to move or modify for this project without significant system improvements. The regulator structures and their approximate locations within or near the project are described in the Table 1. The location of the NEORSD regulators are delineated by a green triangle on Figures 4 and other the figures included with this discussion.

Table 1 – NEORSD CSO System Regulators Locations within the Project Area

NEORSD Regulator Identifier	Location within Project Area	NEORSD System
Within the project area:		
S-10	55th Street and I-490 intersection	Southerly WWTP
S-11	Kinsman Road and East 64th Street intersection	Southerly WWTP
S-12	Kinsman Road and East 64th Street intersection	Southerly WWTP
S-12A	Kinsman Road and Grand Avenue intersection	Southerly WWTP
S-14	Near the northern terminus of Berwick Road	Southerly WWTP
S-20	Near the western terminus of Grand Road to the south of the RTA tracks	Southerly WWTP
S-20A	79th Street and Grand Avenue intersection	Southerly WWTP
S-21	75th Street immediately to the south of the RTA tracks bridge	Southerly WWTP
S-21A	75th Street immediately to the south of the RTA tracks bridge	Southerly WWTP
DV-17	East of the MLK Boulevard and north of Euclid Avenue	Easterly WWTP
DV-18	In Stokes Boulevard to the south of Euclid Avenue	Easterly WWTP
DV-19	Stearns Road and E. 109th Street intersection	Easterly WWTP
DV-20	Stearns Road and E. 109th Street intersection	Easterly WWTP
DV-21	Park Lane and E 107th Street intersection	Easterly WWTP

The regulators within the project area that are a part of the Southerly WWTP system (labeled with a "S" prefix on the regulator ID) direct combined sanitary and storm water overflows to CSO outfalls CSO-039 and CSO 040 located along the Cuyahoga River to the west of the project (see Figure 4). The regulators within the project area within the Easterly WWTP system (to the east of Buckeye Road) (labeled with a "DV" prefix on the regulator ID) direct combined overflows to CSO outfalls located in the Doan Brook valley (CSOs 223, 236, and 073). A portion of the central of the project area is served by the sewersheds for CSO outfalls that drain into Lake Erie (CSOs 202, 203, and 204) however no regulators (labeled with an "E" prefix on the regulator ID) in this portion of the Easterly WWTP system lines are located within the project study area.

The project area is also served by a NEORSD interceptor network that directs storm water and wastewater to the Southerly and Easterly WWTPs. The majority of these interceptors are greater than 4 feet in diameter and many were constructed in deep tunnels with manhole depths that range from 20 feet to over several hundred feet. Table 2 describes the location and the WWTP system for each of the NEORSD interceptors within the project study area. The NEORSD interceptors are delineated by a red dashed line on Figure 4 and the other figures. The diameter of the interceptor is labeled on the attached figures where available (see Figures 8 through 10). A "0" inch diameter indicates that the diameter information was not available on the CSO system GIS information or the system plans obtained from the NEORSD. It should be noted that many of the interceptors are relatively old and have irregular shapes and that the diameter listed represents the maximum dimension of the interceptor.

Table 2 - NEORSD Interceptor Locations within the Project Area

Interceptor Name	Alignment Street	Location Along Street	WWTP Serving the Interceptor
Southerly – Main Branch	Between 55th St and 79th St.	Across Project Area	Southerly WWTP
Southerly – Main Branch	Woodland Ave.		Southerly WWTP
16" Sludge Force Main	Along E 55th St.	Across Project Area	Southerly WWTP
Unnamed	Perpendicular to Kinsman Rd.	To north of the RTA tracks	Southerly WWTP
Easterly – Addison Branch	79th Street	To the north from the RTA tracks	Easterly WWTP
Easterly – E. 79th Branch	83rd Street	To the north from Woodland Avenue	Easterly WWTP
Easterly – E. 79th Branch	Buckeye Road	Woodland Avenue to Woodhill Road	Easterly WWTP
Easterly – E. 79th Branch	Woodland Avenue	Between Buckeye Road and Woodhill Road	Easterly WWTP
Doan Valley – Main Branch	Woodhill Road	Quincy Avenue to Woodland Avenue	Easterly WWTP
Doan Valley – Main Branch	Quincy Avenue	105th St. to Woodhill road	Easterly WWTP
Doan Valley – Main Branch	105th Street	To the north from Quincy Avenue	Easterly WWTP

Kingsbury Run flows in a northwesterly direction towards the project area and is an enclosed "captured stream" (part of the CSO system) and enters the project area along the south between Berwick Road and East 64th Street. Kingsbury Run ultimately discharges to the Cuyahoga River to the west of the project area via outfall CSO-40 (see Figure 4).

Doan Brook is an enclosed "captured stream" that lies immediately outside the project area to the east in Amber Park and Rockefeller Park between Stokes Boulevard and Martin Luther King Boulevard (see Figure 4). Doan Brook flows northward underneath the RTA tracks, daylights in Rockefeller Park, and ultimately discharges into Lake Erie. Multiple CSO outfalls discharge combined flow into the enclosed section of Doan Brook near the project area before it daylights on the surface downstream in Rockefeller Park.

The NEORSD provided the layout for possible storm only lines as shown in blue on Figures 4, and 8 through10. There are some locations where these lines are overlapped by the CSO system lines as provided by the NEORSD and Cleveland WPC so it is possible that these lines do not truly convey only storm water. Further discussion with NEORSD staff and research of the NEORSD system data needs to be initiated to determine the actual limit of storm only lines in or near the project study area.

Under the Clean Water Act, the NEORSD is required to plan, design, and construct a Long Term Combined Sewer Overflow Control Strategy (CSOCS), which is estimated to cost $1.6 billion dollars and consists of 65 projects, including adding 103 miles of additional pipes and tunnels, above and below ground storage, pump stations and WWTP upgrades (NEORSD, 2005). Some projects will be connecting sewers and other projects will be separating storm sewers from the combined system. The goal of CSOCS is to dramatically reduce the frequency and volume of combined sewer overflows into surrounding water bodies. The NEORSD has estimated that it will take an estimated 30 years to complete the design and construction for the 65 projects. The following summarizes the CSOCS information for the CSO outfalls that have a potion of their sewershed within the project study area:

CSO – 040
- Location – Kingsbury Run @ Cuyahoga River, North of Jefferson Road
- Estimated Annual Overflows - 79
- Proposed CSO Control Strategy – Southerly Tunnel and Pump Station; S-8 Regulator upgrade; E 37th St. Pump Station upgrade; and miscellaneous District relief sewers and regulator modifications
- Proposed NEORSD Timeline – Starts 14 years after CSO control program starts, 5 years for design-construction-certification.

CSO – 039
- Location – Cuyahoga River turning basin, 400' West of Independence Rd.
- Estimated Annual Overflows - 51
- Proposed CSO Control Strategy – Southerly Tunnel and Pump Station
- Proposed NEORSD Timeline – Starts 14 years after CSO control program starts, 5 years for design-construction-certification.

CSO – 222
- Location – E 105th near Mount Sinai Drive.
- Estimated Annual Overflows - 29
- Proposed CSO Control Strategy – Doan Valley Storage Tunnel and miscellaneous relief sewer and regulator modifications

- Proposed NEORSD Timeline – Starts 5 years after CSO control program starts, 5 years for design-construction-certification.

CSO – 223
- Location – Doan Brook near Liberty Boulevard.
- Estimated Annual Overflows - 44
- Proposed CSO Control Strategy – Doan Valley Storage Tunnel and miscellaneous relief sewer and regulator modifications
- Proposed NEORSD Timeline – Starts 5 years after CSO control program starts, 5 years for design-construction-certification.

CSO – 203
- Location – Lake Erie east of the E. 55th St alignment
- Estimated Annual Overflows - 14
- Proposed CSO Control Strategy – Shoreline Area Storage Tunnel
- Proposed NEORSD Timeline – Starts 10 years after CSO control program starts, 6 years for design-construction-certification

CSO – 204
- Location – Lake Erie near the E. 72nd St. alignment.
- Estimated Annual Overflows - 48
- Proposed CSO Control Strategy – Shoreline Area Storage Tunnel
- Proposed NEORSD Timeline – Starts 10 years after CSO control program starts, 6 years for design-construction-certification

City of Cleveland Phase II Storm Water Management Plan

The smaller local sewers, including combined sewers and storm sewers, are owned and maintained by the Cleveland Division of Water Pollution Control (Cleveland WPC). These local combined sewers capture storm water at the road surface via storm drain inlets. These local sewers transport storm water and wastewater to the NEORSD interceptors, regulators, CSO outfalls, and to the NEORSD WWTPs. The Cleveland WPC local system is shown on the Figures 8 through 10 as a narrow solid orange line with arrows that point in the direction of flow. The diameter and inverts of the local system are labeled on the attached figures where available. A "0" inch diameter or invert elevation indicates that the information was not available on the CSO system GIS information or the system plans obtained from the NEORSD or Cleveland WPC.

The Cleveland WPC is responsible for the network of sewers conveying sanitary sewage and industrial waste in the City of Cleveland from their point of origin to the NEORSD interceptors and ultimately the sewage processing facilities for treatment and disposal. The Cleveland WPC maintains, cleans, repairs, and improves the sewers and their associated infrastructure. In areas of combined sewer systems, such as the project area, the jurisdiction of the WPC also includes storm water drainage. The Cleveland WPC is also charged with

managing and supervising matters relating to the elimination, control and regulation of water pollution within the city limits.

The City of Cleveland municipal separate storm sewer system (MS4) is located in the Lake Erie Drainage Basin which includes the Rocky River Watershed, Big Creek Watershed, Mill Creek Watershed, Doan Brook Watershed, and Euclid Creek Watershed (City of Cleveland, 2003). A portion of the Cleveland MS4 also includes Morgan Run Watershed, Doan Brook Watershed, Dugway Brook Watershed, Shaw Brook Watershed, Nine Mile Creek Watershed, Green Creek Watershed, Kingsbury Run Watershed, and Walworth Run Watershed that are located in combined sewer areas. The community is sewered 91 % combined sewers and 9 % separate sewers. All of the project area is served by a combined sewer system. The original combined sewer system was designed to handle the runoff from a 2-year to 3–year storm event – flows generated by storms in excess of those design events may begin to overflow into area waterways at CSO outfalls.

On behalf of the City of Cleveland, the Cleveland WPC prepared and submitted a Storm Water Management Plan (SWMP) in fulfillments of the Ohio Environmental Protection Agency (Ohio EPA) National Pollutant Discharge Elimination System (NPDES) Phase II General Permits for Small Municipal Separate Storm Sewer Systems (Permit No.: OHQ000001) issued on December 27, 2002 (now superseded by Permit No. OHQ000002) (City of Cleveland, 2003). The SWMP states that the storm sewer area of the Cleveland MS4 is primarily located in residential communities with limited commercial and institutional developments. The water quality concerns of the SWMP are:

- Increased runoff due to increases of impervious cover area,
- Sedimentation due to stream bank erosion,
- Increased flooding due to increases in storm water volume, and
- Habitat loss due to increased flow.

The SWMP encourages the use of non-structural storm water management techniques, and low impact development practices on our commercial and institutional areas (City of Cleveland, 2003). According to the SWMP, the City of Cleveland currently requires redeveloped properties to control their storm water quantity through the use of detention facilities and will explore various options to add water quality measures to the detention requirements.

Ohio Department of Transportation – Stormwater Management Plan and BMPs

ODOT prepared a Stormwater Management Plan (SWMP) to address the MS4 Permit requirements. The following information is included in the SWMP report:

- Annual Report – ODOT is required to develop and submit annual reports. These reports contain information on the number of post-construction BMPs designed and installed on ODOT projects.
- ODOT is conducting research on two type of BMPs contained in the policy (Exfiltration Trench and Vegetated biofilter). The permit requires assessment of the BMPs identified in the SWMP.

- Project Drainage – The location of any new stormwater outfalls from the ODOT MS4 need to be documented and reported to the ODOT Office of Environmental Services to be added to ODOT's statewide outfall inventory database. ODOT is required by the MS4 permit to update the outfall inventory database.
- ODOT is required to operate and maintain post-construction BMPs within their right-of-way.

The following are the identified BMPs and a brief description of the BMPs as described in ODOT's Location and Design Manual, Volume 2 dated April 2010:

- Exfiltration Trench – Captures roadway runoff/drainage at the outside edge of shoulder through the use of permeable concrete surface. The permeable concrete surface is placed parallel to the roadway within a concrete structure.
- Bioretention cell – Bioretention Cells consist of depressed low-lying areas that treat storm water through evapotranspiration and filtering through a planting soil. As the storm water passes through the soil it is filtered. An underlying perforated storm sewer or underdrain captures the treated storm water and carries it to an outlet. This ODOT BMP could be incorporated into a potential green infrastructure BMP for this project.
- Infiltration trench – An infiltration trench is an excavated trench that has been lined with a geotextile fabric and backfilled with aggregate.
- Infiltration basin – An infiltration basin is an open surface pond that uses infiltration into the ground as the release mechanism. This ODOT BMP could be incorporated into a potential green infrastructure BMP for this project.
- Constructed Wetlands - Constructed Wetlands treat storm water through bio-retention. They are depressed, heavily planted areas that are designed to maintain a dry weather flow depth ranging between 0.5 to 2 feet. This ODOT BMP could be incorporated into a potential green infrastructure BMP for this project.
- Manufactured Systems – Consist of an underground structure that treat the water quality volume (WQv) by removing particulate matter through settlement. These are placed in an off line configuration with manholes for maintenance and hydraulic performance.
- Vegetated biofilter – Is a BMP treatment train that filters stormwater runoff through vegetation. The biofilter consists of the vegetated portion of the graded shoulder, vegetated slope, vegetated ditch and energy protection area. This ODOT BMP could be incorporated into a potential green infrastructure BMP for this project.
- Extended Detention or Retention Basin - Extended detention captures runoff and slowly releases the captured runoff over a period of time. Detention basin is a dry pond that detains stormwater runoff for quantity and limited quality control. Retention basin is a "wet" pond that has a minimum surface water elevation between storms that is defined as a permanent pool. This ODOT BMP could be incorporated into a potential green infrastructure BMP for this project.

Figures 5 through 7 show blue arrows that delineate preliminary storm water flow directions for the proposed project alignments based upon existing topographic information. These three figures also show locations that have been identified as Potential Green Infrastructure BMP areas where larger "green" BMPs such as constructed wetlands, extended detention, or

retention basins (see the list of BMPs above) could be constructed to treat both water quality and quantity from the proposed project. These potential green infrastructure BMP areas were preliminarily identified using a map of existing vacant or landbank parcels (see Figure 11) to select parcels not located in areas of known redevelopment or in areas thought to be areas of prime redevelopment potential such as near intersections.

Lower Cuyahoga River Total Maximum Daily Load (TMDL)

The Lower Cuyahoga River Total Maximum Daily Load identifies the following regulatory and non-regulatory based actions applicable to or recommended for western portion of the project study area (CSO outfalls 039 and 040):

Regulatory:

- NPDES/OEPA Phase I and II Stormwater requirements – These include the MS4 and Construction Permit requirements.
- Riparian Ordinances
- 208 – Plans – NOACA and NEFCO updated plans
- Nine Minimum Controls for Combined Sewer Overflows (CSOs). For reference, OEPA's website where the nine minimum controls can be viewed: www.epa.state.oh.us/dsw/cso/csostrem.pdf

Non-regulatory:

- Point source control
- Stormwater management
- Riparian corridor initiatives
- Education

For additional information or to download a copy of the September 2003, *Total Maximum Daily Loads for the Lower Cuyahoga River Final Report*, use the following web address: www.epa.state.oh.us/dsw/tmdl/Cuyahoga_lower_final_report.pdf

Stormwater Issues

The local WPC CSO system was designed to handle the runoff from a 2 to 3–year storm events. Flows in excess of the 2-year design storm may result in system overflows into area waterways via CSO outfalls. Minimizing additional project storm water runoff as a result of increased impervious area is recommended. Discharging project storm water to the local system could require some form of water quantity detention, or improvements to the existing local combined system to increase the capacity of the system. Existing and proposed discharges to the combined sewer system will need to be assessed for potential quantity impacts to the local system and the NEORSD CSO system that control the system overflows.

Project storm water could also be directed to the existing combined sewer overflow system downstream of the NEORSD regulators. This would eliminate any concerns regarding capacity and function of the regulators, and the capacity of the local combined system associated with project storm water runoff discharges. The capacity of the NEORSD line from the regulator to the CSO outfall would need to be evaluated.

To minimize the potential for combined sewer overflows in the local lines or for impacts on the performance of a particular NEORSD regulator, it may be more feasible to construct a bypass of the local combined system lines and construct separate storm sewer lines that connected directly to manholes of NEORSD interceptors. Provided the interceptor has the capacity to convey the project storm water runoff, this would eliminate the potential for the project to increase the potential for combined flow discharges in excess of the system capacity in the local lines. Regardless, this type of connection would require the installation of water quantity detention areas to maintain storm water runoff levels within the existing capacity acceptable to the NEORSD for the either the Easterly or Southerly WWTP systems.

Another discharge option would be to create a project storm water only outfall discharge directly into surface water bodies such as the Cuyahoga River or Doan Brook without a connection to any existing CSO systems. Discussions with Cleveland WPC staff earlier in the project development process determined that storm water quantity or quality detention or other permanent controls may not be required if project discharges to a surface water body, however, ODOT's Post-Construction BMP policy would require water quality treatment of the discharges. Project submittals would be evaluated on the amount of storm water runoff increases being directed to these streams at each point of discharge from the project; however, these surface water systems have less stringent discharge requirements than the combined sewer system. Direct discharges to the Cuyahoga River or Doan Brook would fall under the jurisdiction of the Cleveland SWMP.

Given the distance to the Cuyahoga River and the infrastructure and topography present between the river and the western portion of the project study area this option will be costly and maybe infeasible. Doan Brook lies closer to the project study area however only a small portion of Doan Brook to the north of the eastern section of the project is an open channel. Both of these options would require the construction of project storm water only lines and inlets along the project alignments while maintaining (and capping any existing connections to) the existing local combined system lines and within the existing right-of-way.

The project discharge options and the concerns likely to be encountered by each discharge option are summarized in Table 3.

Table 3- Design Concerns for Each Potential Discharge Option						
Project Stormwater Discharge Options	**WWTP Capacity a Concern ?**	**System Capacity Analysis and Quantity BMPs Required?**	**ODOT Water Quality BMPs Needed?**	**Cleveland SWMP Jurisdiction ?**	**Capacity of Existing Local System a Concern?**	**Potential for Increased Combined Overflows?**
Discharge to local combined system	Yes	Yes	No	No	Yes	Yes
Discharge to NEORSD interceptors	Yes	Yes	No	No	No	Yes
Discharge upstream of regulators on NEORSD CSO outfall line	Yes	Yes	No	No	No	Yes
Discharge downstream of last regulator on NEORSD CSO outfall line	No	Yes	Yes	No	No	No
Discharge directly to new project storm water only outfall	No	No	Yes	Yes	No	No

There is no documented or published NEORSD wide design standard however, the following sections describe the process involved in connecting project storm water runoff to the NEORSD system:

- Permission to tie into a district line is all dependent upon the capacity available or built into the line in question – every potential sewer tap is done on a case-by-case basis. NEORSD engineering is responsible for approving the design and supporting capacity analysis.
- CSO Control Program design criteria summary – Typical year storms derived from Cleveland Hopkins International Airport rainfall data (46 years worth of data collected). The NEORSD evaluates this data and documents the fifth highest storm (5^{th} largest storm would be less than the 5 year 1 hour storm, this storm is related to a 6 month +/- storm) and this storm is then used as the basis for design. As the design advances, there will be a detailed hydraulic model developed to assess system operation. The assessment is used to determine how the tunnels operate and where and when the these tunnels are "closed off" from further rainfall or surface runoff input, this then leads to surface water discharges. Storm surges within tunnels, hydraulic grade lines coming above ground are design issues which are addressed during the hydraulic modeling of specific systems. The majority of the consolidation (local collection pipes) pipes which convey flow to the tunnels are typically designed and sized for the 5-year storm peak discharge.

This creates the following two design scenarios for the project design engineers:

- For runoff or drainage that will continue to be discharged into the combined system, ODOT will be required to work with NEORSD to model these project drainage areas and evaluate the current and proposed runoff volumes being discharges into the system. In these project areas, the governing design method will be NEORSDs design criteria. An evaluation of the existing and project proposed peak discharges in areas where additional pavement will be constructed will be completed by the project design engineers. This evaluation will then be submitted to the NEORSD for a determination of the impact of these proposed changes upon the capacity of the NEORSD combined sewer system. ODOT will then review the NEORSD impact study for concurrence.
- For project areas where ODOT is separating runoff from NEORSD CSO drainage areas, ODOTs drainage design methods and criteria will govern.

The following criteria will be applied to assist in determining BMP selection and documenting whether project stormwater runoff can be separated from the surrounding NEORSD combined sewer system:

- Availability of right-of-way area for BMP use.
- Ability to divert project runoff to local storm sewer conveyance system.
- Ability to locate, purchase easements and construct necessary storm sewer conveyances to a reasonable outfall location.
- Impacts on local road systems as a result of Opportunity Corridor project work.
- Ability to construct and install Post-Construction controls in drainage areas determined to be separated from the combined sewer system.
- Ability to provide a potential positive impact on the combined sewer overflows and system capacity issues with the existing combined sewer systems.
- Would separation compliment NEORSD Long Term Control Plans, completed studies, Early Action Plans, or NEORSD NPDES permit(s) for CSO outfalls?
- What Cuyahoga River Total Maximum Daily Load requirements need to be addressed and/or incorporated into BMP recommendations?
- What City of Cleveland MS4 SWMP BMPs should be considered?
- Where Post-Construction BMPs are recommended, how will these be accessed for operations and maintenance service?
- Project areas where right-of-way is being considered to be purchased for constructing the preferred alternatives, could portions of the right of way areas be used for post-

construction controls? If yes, recommendation to consider potential innovative BMP options.

Potential Modifications to Existing Systems

The existing NEORSD and Cleveland WPC CSO system lines in the project study area may need to be modified to accept project storm water runoff or to allow the construction on the proposed roadway and other infrastructure for each of the alternatives. If areas of the project are to be separated from the NEORSD and Cleveland WPC CSO system lines, then project storm water only lines and inlets will be constructed along the project alignments while maintaining (and capping any existing connections to) the existing CSO system lines within the existing right-of-way.

The depth to a particular existing CSO line may require that the line be moved or modified if that line is too shallow and will be impacted by the proposed construction even if the project does not to connect project storm water runoff to that line. A review of the system invert elevations (shown on Figures 8 through 10) shows that the depth of the existing systems in the central and eastern portions of the project study area are not close enough to the surface to require modification by the proposed alternatives.

In the western portion of the project study area, one of the alternatives for the I-490/E. 55th St./Bower Avenue area is to have a portion of the proposed intersection improvements below existing grade. This below grade portion of the proposed improvements may require the relocation or modification of the existing NEORSD interceptor lines, regulator S-10, and other local CSO lines in the area. Figure 12 shows this area in more detail and presents the depth below existing grade of each of the existing lines in the area. Construction of the below grade portions of the project in the this area would require regulator S-10 and the lines connected to it to be moved to the south closer to the 60" CSO line. Also the 16" forced main sludge line which carries sludge from the Easterly WWTP (there is no sludge treatment at the Easterly WWTP) to the Southerly WWTP for treatment is shallow and would need to be relocated. In addition, the bulkhead on the 98" line in E. 55th Street to the north of rgulator S-10 could be moved north without compromising the capacity or function of the line.

Summary

The existing surface water drainage system within the project study area discharges entirely to a portion of the CSO system maintained in part by both the NEORSD and the Cleveland WPC. The project study area to the west of Buckeye Road is a portion of the NEORSD Southerly WWTP CSO system and CSO outfalls on the Cuyahoga River and the project study area to the east of Buckeye Road is a portion of the NEORSD Easterly WWTP CSO system and CSO outfalls on Doan Brook and Lake Erie.

The Cleveland WPC is responsible for the network of sewers conveying sanitary sewage and industrial waste in the City of Cleveland from their point of origin to the NEORSD interceptors. The Cleveland WPC is charged with managing and supervising matters relating to the elimination, control and regulation of water pollution within the city limits. The City of Cleveland currently requires redeveloped properties to control their storm water quantity through the use of detention facilities and will explore various options to add water quality measures to the detention requirements.

Ten potential green infrastructure BMP areas were preliminarily identified using a map of existing vacant or landbank parcels. The following ODOT BMPs could be incorporated into a potential green infrastructure BMP area on the identified areas for this project.

- Bioretention cell
- Infiltration trench
- Infiltration basin
- Constructed Wetlands
- Vegetated biofilter, and
- Extended Detention or Retention

Several options for the discharge of project storm water have been identified as listed below:

- Discharging project storm water to the local Cleveland WPC system could require some form of water quantity detention, or improvements to the existing local combined system to increase the capacity of the system. This option could be unitized throughout the project area provided land is available to provide detention of the project storm water before discharging the storm water to the local Cleveland WPC system.
- Discharging project storm water to the existing NEORSD CSO outfall lines downstream of the last NEORSD regulator would eliminate any concerns regarding capacity and function of the regulators and would require water quality BMPs to treat project storm water discharges. This option would be most feasible in the Eastern portion of the project study area where sections of CSO outfalls lines that are downstream of the last regulator lie the closest to the project study area. Land would be required to provide water quality treatment of the storm water prior to discharge to the CSO Outfall line. This option would require the construction of project storm water only lines and inlets along the project alignments while maintaining (and capping any existing connections to) the existing local combined system lines within the existing right-of-way.

- Discharging project storm water to directly to manholes of NEORSD interceptors would eliminate the potential for the project to increase the potential for combined overflow discharges (if there are no regulators located downstream of the connection). This would require the installation of water quantity detention areas to maintain storm water runoff to levels acceptable to the NEORSD but would not require water quality BMPs to treat project storm water since the project discharge would be treated at the NEORSD WWTP. This option could be unitized wherever interceptor manholes are located in the project area provided land is available to provide detention of the storm water before discharging to the NEORSD interceptor manhole.
- Discharging project storm water to a new project storm water only outfall discharge directly into surface water bodies such as the Cuyahoga River or Doan Brook. Direct discharges to the Cuyahoga River or Doan Brook would fall under the jurisdiction of the Cleveland SWMP and storm water quantity or quality detention or other permanent controls may not be required however ODOT's Post-Construction BMP policy would require water quality treatment of the discharges. Given the distance to the Cuyahoga River and the infrastructure and topography present between the river and the western portion of the project study area this option will be costly and maybe infeasible. Doan Brook lies closer to the project study area, however only a small portion of Doan Brook is an open channel. This option would require the construction of project storm water only lines and inlets along the project alignments while maintaining (and capping any existing connections to) the existing local combined system lines within the existing right-of-way.

Opportunities exist to combine the project green infrastructure objectives with regional green infrastructure goals and objectives that might be a part of various NEORSD or Cleveland WPC programs or projects. These potential joint projects could provide multiple benefits to the area by satisfying project water quality treatment requirements while also reducing contributions to the Cleveland WPC and NEORSD systems and the potential for CSO overflows into local surface water bodies.

The depth to a particular existing CSO line may require that the existing line be moved or modified if that line is too shallow and will be impacted by the proposed construction even if the project does not to connect to that line. One of the alternatives for the I-490/E. 55th St./Bower Avenue area is to have a portion of the proposed improvements below existing grade and therefore may require the relocation or modification of the existing NEORSD interceptors, Regulator S-10, and other Local CSO lines in the area.

References

City of Cleveland, 2003. *USEPA Phase II Stormwater Management Plan*. March.

Metcalf and Eddy and CH2M-Hill, 2002a. *Northeast Ohio Regional Sewer District*. *Easterly CSO Phase II Facilities Plan*, June.

Metcalf and Eddy and CH2M-Hill, 2002b. *Northeast Ohio Regional Sewer District – Southerly CSO Phase II Hydraulic Modeling Report*. May.

NEORSD, 2005. *CSO Facilities Planning Summary Report.* March

Ohio Department of Transportation, 2003. *Stormwater Management Plan*. March.

Ohio Department of Transportation, 2010. *Location and Design Manual, Volume 2*. April.

Ohio EPA, 2003. *Total Maximum Daily Loads for the Lower Cuyahoga River, Final Report.* September

Figures

Legend

- OC Study Area
- Drainage Areas
- Flow Direction

N

0 400 Feet

WOODLAND AVE
WILLCUT CT
KINSMAN CT
GRISWOLD AVE
VENNING CT
BEAVER AVE
COBLEIGH CT
BUSHNELL CT
ENSIGN AVE
HOLYOKE AVE
CRAYTON AVE
DIAMOND AVE
GRAND AVE
KINSMAN RD
DELL AVE
BERKLEY AVE
E 40TH ST
E 43RD ST
E 47TH PL
E 51ST ST
E 53RD ST
E 55TH ST
E 61ST ST
E 62ND PL
E 62ND ST
E 63RD ST
E 64TH ST
E 65TH ST
E 67TH ST
E 68TH ST
E 68TH PL
E 69TH ST
E 69TH PL
E 71ST ST
E 73RD ST
E 75TH ST
E 71ST PL
JULIA AVE
E 68TH ST
SAGINAW RD
E 66TH ST
E 69TH ST
BERWICK RD
SIDEWAY AVE
COLFAX RD
E 72ND ST
FALCON RD
TIBBALS RD
Kingsbury Run
DB1
DB2
DB3
DB4
DB5
DB6
DB7
DB8
DB9
DB10
DB11
DB12
DB13
DB14
DB15
DB16
DB17
DB18
DB19
DB20
INTERSTATE 490
INTERSTATE 490
BOWER AVE
PRAHA AVE
BUTLER AVE
E 64TH ST
CARPENTER AVE
E 59TH ST
FRANCIS AVE
SIDAWAY AVE
SELMA AVE
ROY AVE
E 65TH ST
E 67TH ST
E 66TH ST
E 63RD ST
E 61ST ST
E 57TH ST
E 55TH ST
E 55TH ST PL
E 51ST ST
E 50TH ST
BRAGG RD
MARTIN AVE
DOUSE AVE
GALLUP AVE
NURSERY AVE
TRACK AVE
LESTER ST
SWEENEY AVE
MAURICE AVE
HYACINTH CT
WREN AVE
GROVER CT

CUY - Opportunity Corridor

FIGURE 1

WESTERN DRAINAGE AREAS AND FLOW DIRECTION

Legend

- OC Study Area
- Drainage Areas
- Flow Direction

N

0 400 Feet

DB16 DB17 DB18 DB19 DB20 DB21 DB22 DB23 DB24 DB25 DB27 DB28 DB29 DB30 DB31 DB32 DB33 DB34 DB35 DB36 DB37 DB38 DB39 DB40 DB41 DB42 DB43 DB44

SHERMAN CT, E 75TH ST, STANTON CT, LINCOLN CT, E 82ND ST, FOLSOM AVE, E 86TH ST, BECKMAN AVE, E 92ND ST, CAPITOL AVE, E 84TH ST, FREDERICK AVE, AUSTRIAN CT, PLATT CT, E 80TH ST, E 81ST ST, E 83RD ST, NEVADA AVE, CONGRESS CT, E 89TH ST, E 92ND PL, BALDWIN RD, MERRICK CT, WOODLAND AVE, OTIS CT, KENNEDY CT, KENNEDY AVE, CRESTWOOD AVE, E 87TH ST, E 90TH PL, ACCESS RD, E 94TH PL, CUMBERLAND CT, GRANDVIEW AVE, DELL AVE, E 76TH, LISBON RD, GRAND AVE, HENNYSON RD, E 89TH PL, BUCKEYE RD, E 93RD ST, CUMBERLAND AVE, WOODHILL RD, HULDA AVE, DORADO CT, YEAKEL AVE, E 96TH ST, TANTO CT, YEAKEL CT, E 97TH PL, SHALE AVE, EVINS AVE, EVARTS RD, STEINWAY AVE, EWALD RD, E 74TH ST, E 79TH ST, E 80TH PL, E 82ND ST, E 92ND ST, WAMBUNK AVE, ROSEHILL AVE, E 102ND ST, GRAND CT, MCCURDY AVE, SHERWOOD RD, AMBLER AVE, SHAKER BLVD, RAWLINGS AVE, WAGNER AVE, HOLTON AVE, E 78TH ST, HOLTON CT, E 83RD ST, YEAKEL CT, FORT AVE, E 91ST ST, ALPINE AVE, E 92ND ST, AMBLER AVE, KOLAR AVE

CUY - Opportunity Corridor

FIGURE 2

CENTRAL DRAINAGE AREAS AND FLOW DIRECTION

Legend

- OC Study Area
- Drainage Areas
- Flow Direction

0 400 Feet

DB41 DB45 DB48 DB49 DB46 DB43 DB50 DB47 DB44 DB51 DB52 DB54 DB55 DB57 DB58 DB56 DB53

95TH ST 97TH ST E 100TH ST E 101ST ST E 102ND ST E 103RD ST E 96TH ST E 97TH ST E 105TH ST E 106TH ST E 107TH ST E 108TH ST E 109TH ST

CEDAR AVE HOLLINGSWORTH CT CARNEGIE AVE EUCLID AVE CHESTER AVE LOGAN CT NEWTON AVE LAMONT AVE STRATFORD CT WAIN CT QUINCY AVE NORMAN AVE HUDSON AVE ARTHUR AVE FRANK AVE WILBUR AVE RESERVE CT CONNECTING ROAD LIBERTY BLVD QUEBEC AVE WOODSTOCK AVE WOODHILL RD CALVIN RD COLONIAL CT STOKES BLVD PETRARCA RD DEERING AVE STEARNS RD MARTIN LUTHER KING DR EAST BLVD ADELBERT RD MAPLESIDE RD BALDWIN RD JUGHANDLE

Doan Brook

CUY - Opportunity Corridor

FIGURE 3

EASTERN DRAINAGE AREAS AND FLOW DIRECTION

Legend

- NEORSD CSO OUTFALL
- NEORSD_FLOW_REGULATING_STRUCTURE
- NEORSD INTERCEPTORS
- OC Study Area
- LOCAL STORM ONLY PIPE
- PROJECT ALTERNATIVE ALIGNMENTS

N

0 2,000 Feet

CSO-200
CSO-202
CSO-203
CSO-204
CSO-222
CSO-223
CSO-240
CSO-039
CSO-040
CSO-036
CSO-035

Doan Brook
Kingsbury Run

DV-10
DV-17
DV-18
DV-19
DV-20
DV-21
DV-05
DV-46
DV-54

E-24
E-25
WR-08
WR-27A
WR-07A
WR-06
WR-05
WR-01
WR-02

S-05
S-06
S-08
S-09
S-10
S-11
S-12
S-12A
S-13
S-14
S-18
S-20
S-20A
S-21
S-21A
S-28
S-30
S-44
S-49
S-80
S-81
S-82
S-83
S-86
S-88

SO-03 - AWM
SO-05 - AGV

LEE AVE
E 86TH ST
E 85TH ST
E 82ND ST
E 79TH ST
E 81ST ST
E 90TH ST
E 115TH ST
E 118TH ST
MAYFIELD RD
EUCLID AVE
ADELBERT RD
CARLTON RD
HARCOURT DR
DELAWARE DR
GRANDVIEW AVE
CEDAR RD
ESSEX RD
STOKES BLVD
BALDWIN RD
WOODSTOCK AVE
FAIRHILL RD
E 127TH ST
E 126TH ST
S PARK BLVD
SHALE AVE
BUCKEYE RD
LUDLOW RD
FERNWAY RD
CEDAR AVE
E 66TH ST
E 73RD ST
E 70TH ST
E 69TH ST
E 68TH ST
E 83RD ST
E 87TH ST
E 89TH ST
E 90TH ST
E 95TH ST
E 93RD ST
E 97TH ST
E 100TH ST
E 84TH ST
E 81ST ST
E 82ND ST
E 80TH ST
E 69TH PL
E 71ST ST
E 51ST ST
E 46TH ST
E 49TH ST
E 39TH ST
E 38TH ST
E 30TH ST
W 4TH ST
W 3RD ST
CENTRAL AVE
CASE CT
PLATT AVE
WOODLAND AVE
COLFAX RD
INTERSTATE 490
DILLE AVE
TRACK AVE
CLARK AVE
QUIGLEY RD
INDEPENDENCE RD
CABLE AVE
ENGEL AVE
BESSEMER AVE
MORGAN AVE
UNION AVE
SOPHIA AVE
MELBA AVE
PARKHILL AVE
SOIKA AVE
IMPERIAL AVE
KINSMAN RD
EASTON AVE
BESSEMER AVE
MARAH AVE
ELIOT AVE
LAISY AVE
HEATH AVE
E 110TH ST
E 113TH ST
E 114TH ST
E 116TH ST
E 117TH ST
E 118TH ST
E 119TH ST
E 121ST ST
E 128TH ST
E 130TH ST

CUY - Opportunity Corridor

FIGURE 4

SEWERSHEDS, NEORSD INTERCEPTORS, AND CSO OUTFALLS

Legend

- OC Study Area
- Drainage Areas
- Potential Green Infrastucture BMP Areas
- Project Alternative Alignments
- Existing Flow Direction
- Proposed Project Flow Direction

N

0 400 Feet

DB1 DB2 DB3 DB4 DB5 DB6 DB7 DB8 DB9 DB10 DB11 DB12 DB13 DB14 DB15 DB16 DB17 DB18 DB19 DB20

CSO-39 CSO-40 CSO-40

INTERSTATE 490 INTERSTATE 490

BERKLEY A E 40TH ST E 47TH PL E 51ST ST E 55TH ST E 61ST ST E 62ND PL E 62ND ST E 63RD ST E 64TH ST E 65TH ST E 67TH ST E 68TH ST E 68TH PL E 69TH ST E 69TH PL E 71ST ST E 73RD ST E 75TH ST E 50TH ST E 51ST PL E 51ST ST E 54TH ST E 59TH ST E 61ST ST E 63RD ST E 64TH ST E 66TH ST E 67TH ST E 69TH ST E 70TH ST E 72ND ST E 73ST PL

WILLCUT CT KINSMAN CT VENNING CT BUSHNELL CT HYACINTH CT WREN AVE GROVER CT

GRISWOLD AVE BEAVER AVE DELL AVE ENSIGN AVE HOLYOKE AVE CRAYTON AVE DIAMOND AVE GRAND AVE JULIA AVE KINSMAN RD SAGINAW RD E 68TH ST E 66TH ST BERWICK RD SIDEWAY AVE BUTLER AVE BOWER AVE PRAHA AVE FRANCIS AVE CARPENTER AVE SIDAWAY AVE SELMA AVE ROY AVE MAURICE AVE SWEENEY AVE

Kingsbury Run

MARTIN AVE DOUSE AVE GALLUP AVE NURSERY AVE TRACK AVE BRAGG RD COLFAX RD FALCON RD TIBBALS RD

CUY - Opportunity Corridor

FIGURE 5

WESTERN DRAINAGE AREAS AND PROJECT FLOW DIRECTION

Legend

- OC Study Area
- Drainage Areas
- Potential Green Infrastucture BMP Areas
- Project Alternative Alignments
- Existing Flow Direction
- Proposed Project Flow Direction

N

0 400 Feet

CUY - Opportunity Corridor

FIGURE 6

CENTRAL DRAINAGE AREAS AND PROJECT FLOW DIRECTION

Legend

- OC Study Area
- Drainage Areas
- Potential Green Infrastucture BMP Areas
- Project Alternative Alignments
- Existing Flow Direction
- Proposed Project Flow Direction

0 400 Feet

DB41 DB45 DB48 DB49 DB46 DB43 DB50 DB47 DB44 CSO-222 DB51 DB52 DB54 DB55 DB57 DB58 DB56 DB53 CSO-223

QUINCY AVE NORMAN AVE HUDSON AVE ARTHUR AVE QUEBEC AVE WOODSTOCK AVE WOODHILL RD MAPLESIDE RD BALDWIN RD FRANK AVE WILBUR AVE CEDAR AVE HOLLINGSWORTH CT CARNEGIE AVE EUCLID AVE CHESTER AVE LOGAN CT NEWTON AVE LAMONT AVE LIBERTY BLVD COMMERCE ROAD RESERVE CT STOKES BLVD DEERING AVE STEARNS RD MARTIN LUTHER KING DR EAST BLVD ADELBERT RD JUGHANDLE COLONIAL CT PETRARCA RD WAIN CT

E 96TH ST E 97TH ST E 101ST ST E 102ND ST E 103RD ST E 105TH ST E 106TH ST E 107TH ST E 108TH ST E 109TH ST

Doan Brook

CUY - Opportunity Corridor

FIGURE 7

EASTERN DRAINAGE AREAS AND PROJECT FLOW DIRECTION

Legend

- OC Study Area
- Drainage Areas
- Potential Green Infrastucture BMP Areas
- Project Alternative Alignments
- LOCAL STORM ONLY PIPE
- Existing Flow Direction
- Proposed Project Flow Direction

CSO Sewersheds shaded and labeled as provided by the NEORSD.
CSO system inverts and diameters listed when available.
"0" values indicate that no invert information is available.

N

0 400 Feet

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FIGURE 8

WESTERN DRAINAGE AREAS, SEWERSHEDS, CSO SYSTEM, AND PROJECT FLOW DIRECTION

Legend

- OC Study Area
- Drainage Areas
- Potential Green Infrastucture BMP Areas
- Project Alternative Alignments
- LOCAL STORM ONLY PIPE
- Existing Flow Direction
- Proposed Project Flow Direction

CSO Sewersheds shaded and labeled as provided by the NEORSD.
CSO system inverts and diameters listed when available.
"0" values indicate that no invert information is available.

N

0 400 Feet

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FIGURE 9

CENTRAL DRAINAGE AREAS, SEWERSHEDS, CSO SYSTEM, AND PROJECT FLOW DIRECTION

Legend

- OC Study Area
- Drainage Areas
- Potential Green Infrastucture BMP Areas
- Project Alternative Alignments
- LOCAL STORM ONLY PIPE
- Existing Flow Direction
- Proposed Project Flow Direction

CSO Sewersheds shaded and labeled as provided by the NEORSD.
CSO system inverts and diameters listed when available.
"0" values indicate that no invert information is available.

0 400 Feet

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FIGURE 10

EASTERN DRAINAGE AREAS, SEWERSHEDS, CSO SYSTEM, AND PROJECT FLOW DIRECTION

Legend

- Potential Green Infrastucture Parcels
- OC_Study_Area
- Landbank Parcels
- Vacant Parcels
- Project Alternative Alignments

N

0 1,000 Feet

CUY - Opportunity Corridor

FIGURE 11

VACANT AND LANDBANK PARCELS AND POTENTIAL GREEN INFRASTRUCTURE AREAS

Legend

- NEORSD_FLOW_REGULATING_STRUCTURE
- NEORSD INTERCEPTORS
- LOCAL STORM ONLY PIPE
- LOCAL_SEWER

0 40 Feet

96" CSO Line Bulkhead Disconnection Just North of S-10. 12" line is Short Local Tie-in Line

78" Storm Water Outlet Line from S-10. Invert is Approx 35' Below Grade. 78" Flows South at 1% slope.

Regulator S-10 Invert is 28' Below Grade

16" Sludge Force Main From Easterly WWTP to Southerly WWTP. Invert is Approx. 8'-10' Below Grade. Flows South.

60" S-10 Dry Weather Outlet Line to Southerly-Main to WWTP. Invert is Approx. 54' Below Grade. Flows South and West.

60" CSO Line to Southerly WWTP. Invert Approx. 54' Below Grade. Flows West.

96" CSO line. Flows North to S-10 Regulator. Flow Blocked North of S-10 By Bulkhead.

ODOT Storm Only Line

78" S-10 Storm Water Outlet to CSO-O40. Invert Approx. 35'-40' Below Grade. Flows South.

E 55TH ST

BOWER AVE

INTERSTATE 490

E 54TH ST

E 57TH ST

CUY - Opportunity Corridor

FIGURE 12

EXISTING CSO LINES NEAR I-490 / E. 55TH / BOWER AVE AREA

Appendix F Conceptual Project Cost Estimates

GCRTA and CSX
Railroad Corridor

East 55th Street at IR-490

Conceptual Project Cost Estimates for the Opportunity Corridor

Ohio Department of Transportation

ODOT PDP Step 5 - July 13, 2010

Table of Contents

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate A - West Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	25,173	$201,381
Sidewalk Removed	sq ft	$3	54,376	$163,128
Curb Removed	ft	$2	13,594	$27,188
Drainage Removed	ft	$12	6,797	$81,564
Excavation/Embankment	lane-mile of 1-ft depth	$22,800	6.31	$143,958
Clearing & Grubbing	acre	$2,200	98.11	$215,837
Topsoil	cu yd	$15	15,852	$237,781
Seeding & Mulching	sq yd	$1	30,691	$30,691
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	52,058	$2,134,365
Curb and Gutter	ft	$36	19,899	$716,355
Sidewalk	sq ft	$4	43,404	$173,616
Multi-Purpose Path	ft	$30	32,740	$982,206
Drainage				
Drainage for curbed pavement	ft	$200	9,949	$1,989,876
Underdrains	ft	$9	16,361	$147,247
Demolition (includes asbestos mitigation)				
Commercial Buildings	sf	$13	3,796	$49,348
Residential	each	$12,000	33	$396,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	530	$159,141
Intersection Enhancements	each	$30,000	2	$60,000
Lighting				
Roadway Lighting	ft	$35	5,965	$208,764
Pedestrian-scale Lighting	ft	$85	7,945	$675,299
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	2	$350,000
Signage	mile	$250,000	1.13	$282,419
Pavement Markings	mile	$2,000	4.70	$9,397
Structures				
New Bridge	lump			$40,108,900
Bridge Removal	lump			$0
Reinforced Concrete Retaining Wall	sq ft	$100	15,217	$1,521,718
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump	$529,870		$529,870
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$1,180,000
Misc. Additional Costs (80/20 Rule)				$13,194,013
Summary of Probable Total Construction Costs 2010				$65,970,063
Preliminary Development Phase/Final Development Phase (12%)				$7,916,408
Contract Administration & Inspection (5%)				$3,298,503
Right of Way Acquisition	lump			$2,815,000
Relocation Assistance	lump			$2,307,000
Contingencies (20%)				$13,194,013
Summary of Probable Total Project Costs 2010				**$95,500,986**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate A - Central Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	31,019	$248,150
Sidewalk Removed	sf	$3	56,856	$170,568
Curb Removed	ft	$2	14,214	$28,428
Drainage Removed	ft	$12	7,107	$85,284
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	11.84	$270,012
Clearing & Grubbing	acre	$2,200	177.80	$391,169
Topsoil	cu yd	$15	28,503	$427,548
Seeding & Mulching	sq yd	$2	53,403	$106,807
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	78,084	$3,201,457
Curb and Gutter	ft	$36	32,626	$1,174,549
Sidewalk	sq ft	$4	84,970	$339,878
Multi-Purpose Path	ft	$30	72,216	$2,166,477
Drainage				
Drainage for curbed pavement	ft	$200	20,413	$4,082,636
Underdrains	ft	$9	34,738	$312,645
				$0
Demolition (includes asbestos mitigation)				$0
Commercial Buildings	sf	$13	291,013	$3,783,169
Residential	each	$12,000	4	$48,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	953	$286,048
Intersection Enhancements	each	$30,000	6	$180,000
Lighting				
Roadway Lighting	ft	$35	10,692	$374,206
Pedestrian-scale Lighting	ft	$85	12,362	$1,050,735
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	6	$1,050,000
Signage	mile	$250,000	2.02	$506,231
Pavement Markings	mile	$2,000	6.76	$13,530
Structures				
New Bridge	lump			$4,789,700
Bridge Removal	lump			$1,722,896
Reinforced Concrete Retaining Wall	sq ft	$100	17,303	$1,730,250
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump			$0
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$7,532,000
Misc. Additional Costs (80/20 Rule)				$9,018,093
Summary of Probable Total Construction Costs 2010				$44,558,035
Preliminary Development Phase/Final Development Phase (12%)				$5,346,964
Contract Administration & Inspection (5%)				$2,227,902
Right of Way Acquisition	lump			$8,765,000
Relocation Assistance	lump			$3,424,500
Contingencies (20%)				$8,911,607
Summary of Probable Total Project Costs 2010				**$73,234,008**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate A - East Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	24,725	$197,804
Sidewalk Removed	sf	$3	51,978	$155,933
Curb Removed	ft	$2	10,716	$21,431
Drainage Removed	ft	$12	5,358	$64,293
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	2.03	$46,272
Clearing & Grubbing	acre	$2,200	0.00	$0
Topsoil	cu yd	$15	223	$3,342
Seeding & Mulching	sq yd	$2	2,026	$4,051
Drainage				
Drainage for curbed pavement	ft	$200	5,358	$1,071,556
Underdrains	ft	$9	10,120	$91,076
				$0
Demolition (includes asbestos mitigation)				$0
Commercial Buildings	sf	$13	5,604	$72,852
Residential	each	$12,000	7	$84,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	53	$16,000
Intersection Enhancements	each	$30,000	4	$120,000
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	36,625	$1,501,623
Curb and Gutter	ft	$36	10,716	$385,760
Sidewalk	sq ft	$4	82,524	$330,098
Multi-Purpose Path	ft	$30	0	$0
Lighting				
Roadway Lighting	ft	$35	5,358	$187,522
Pedestrian-scale Lighting	ft	$85	6,158	$523,411
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	4	$700,000
Signage	mile	$250,000	1.01	$253,683
Pavement Markings	mile	$2,000	4.15	$8,307
Structures				
New Bridge	lump			$4,609,200
Bridge Removal	lump			$649,530
Reinforced Concrete Retaining Wall	sq ft	$100		$0
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump			$0
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$605,000
Misc. Additional Costs (80/20 Rule)				$2,925,686
Summary of Probable Total Construction Costs 2010				$14,188,971
Preliminary Development Phase/Final Development Phase (12%)				$1,702,676
Contract Administration & Inspection (5%)				$709,449
Right of Way Acquisition	lump			$2,785,000
Relocation Assistance	lump			$587,500
Contingencies (20%)				$2,837,794
Summary of Probable Total Project Costs 2010				**$22,811,390**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate B - West Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	56,105	$448,843
Sidewalk Removed	sf	$3	50,832	$152,496
Curb Removed	ft	$2	12,708	$25,416
Drainage Removed	ft	$12	6,354	$76,248
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	30.06	$685,278
Clearing & Grubbing	acre	$2,200	215.64	$474,410
Topsoil	cu yd	$15	17,769	$266,528
Seeding & Mulching	sq yd	$2	56,948	$113,895
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	90,735	$3,720,137
Curb and Gutter	ft	$36	60,966	$2,194,785
Sidewalk	sq ft	$4	42,165	$168,661
Multi-Purpose Path	ft	$30	30,676	$920,268
Drainage				
Drainage for curbed pavement	ft	$200	30,483	$6,096,624
Underdrains	ft	$9	41,816	$376,346
Demolition (includes asbestos mitigation)				
Commercial Buildings	sf	$13	33,925	$441,025
Residential	each	$12,000	25	$300,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	1,422	$426,647
Intersection Enhancements	each	$30,000	2	$60,000
Lighting				
Roadway Lighting	ft	$35	17,582	$615,355
Pedestrian-scale Lighting	ft	$85	16,862	$1,433,233
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	2	$350,000
Signage	mile	$250,000	2.82	$704,619
Pavement Markings	mile	$2,000	4.19	$8,385
Structures				
New Bridge	lump			$49,612,250
Bridge Removal	lump			$0
Reinforced Concrete Retaining Wall	sq ft	$100	64,571	$6,457,136
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump	$593,710		$593,710
RTA Power Substation Relocation	lump	$4,200,000		$4,200,000
Environmental Remediation	lump			$1,170,000
Misc. Additional Costs (80/20 Rule)				$20,523,073
Summary of Probable Total Construction Costs 2010				$101,912,364
Preliminary Development Phase/Final Development Phase (12%)				$12,229,484
Contract Administration & Inspection (5%)				$5,095,618
Right of Way Acquisition	lump			$3,385,000
Relocation Assistance	lump			$2,825,500
Contingencies (20%)				$20,382,473
Summary of Probable Total Project Costs 2010				**$145,830,439**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate B - Central Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	19,708	$157,664
Sidewalk Removed	sf	$3	42,648	$127,944
Curb Removed	ft	$2	10,662	$21,324
Drainage Removed	ft	$12	5,331	$63,972
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	8.91	$203,076
Clearing & Grubbing	acre	$2,200	180.49	$397,088
Topsoil	cu yd	$15	13,884	$208,261
Seeding & Mulching	sq yd	$2	34,369	$68,738
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	66,078	$2,709,185
Curb and Gutter	ft	$36	32,323	$1,163,644
Sidewalk	sq ft	$4	61,985	$247,941
Multi-Purpose Path	ft	$30	73,309	$2,199,258
Drainage				
Drainage for curbed pavement	ft	$200	16,162	$3,232,344
Underdrains	ft	$9	30,629	$275,665
Demolition (includes asbestos mitigation)				
Commercial Buildings	sf	$13	436,050	$5,668,650
Residential	each	$12,000	6	$72,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	833	$249,926
Intersection Enhancements	each	$30,000	6	$180,000
Lighting				
Roadway Lighting	ft	$35	8,831	$309,080
Pedestrian-scale Lighting	ft	$85	10,331	$878,123
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	6	$1,050,000
Signage	mile	$250,000	1.67	$418,128
Pavement Markings	mile	$2,000	5.42	$10,843
Structures				
New Bridge	lump			$6,612,700
Bridge Removal	lump			$1,352,080
Reinforced Concrete Retaining Wall	sq ft	$100	5,280	$527,950
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump			$0
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$13,207,000
Misc. Additional Costs (80/20 Rule)				$10,403,146
Summary of Probable Total Construction Costs 2010				$51,644,825
Preliminary Development Phase/Final Development Phase (12%)				$6,197,379
Contract Administration & Inspection (5%)				$2,582,241
Right of Way Acquisition	lump			$10,610,000
Relocation Assistance	lump			$2,138,000
Contingencies (20%)				$10,328,965
Summary of Probable Total Project Costs 2010				**$83,501,411**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate B - East Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	24,725	$197,804
Sidewalk Removed	sf	$3	51,978	$155,933
Curb Removed	ft	$2	10,716	$21,431
Drainage Removed	ft	$12	5,358	$64,293
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	2.03	$46,272
Clearing & Grubbing	acre	$2,200	0.00	$0
Topsoil	cu yd	$15	223	$3,342
Seeding & Mulching	sq yd	$2	2,026	$4,051
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	36,625	$1,501,623
Curb and Gutter	ft	$36	10,716	$385,760
Sidewalk	sq ft	$4	82,524	$330,098
Multi-Purpose Path	ft	$30	0	$0
Drainage				
Drainage for curbed pavement	ft	$200	5,358	$1,071,556
Underdrains	ft	$9	10,120	$91,076
Demolition (includes asbestos mitigation)				
Commercial Buildings	sf	$13	2,992	$38,896
Residential	each	$12,000	5	$60,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	53	$16,000
Intersection Enhancements	each	$30,000	4	$120,000
Lighting				
Roadway Lighting	ft	$35	5,358	$187,522
Pedestrian-scale Lighting	ft	$85	6,158	$523,411
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	4	$700,000
Signage	mile	$250,000	1.01	$253,683
Pavement Markings	mile	$2,000	4.15	$8,307
Structures				
New Bridge	lump			$4,609,200
Bridge Removal	lump			$649,530
Reinforced Concrete Retaining Wall	sq ft	$100		$0
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump			$0
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$635,000
Misc. Additional Costs (80/20 Rule)				$2,918,697
Summary of Probable Total Construction Costs 2010				$14,154,026
Preliminary Development Phase/Final Development Phase (12%)				$1,698,483
Contract Administration & Inspection (5%)				$707,701
Right of Way Acquisition	lump			$2,620,000
Relocation Assistance	lump			$518,000
Contingencies (20%)				$2,830,805
Summary of Probable Total Project Costs 2010				**$22,529,015**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate C - West Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	25,696	$205,570
Sidewalk Removed	sf	$3	55,656	$166,968
Curb Removed	ft	$2	13,914	$27,828
Drainage Removed	ft	$12	6,957	$83,484
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	9.79	$223,121
Clearing & Grubbing	acre	$2,200	94.26	$207,380
Topsoil	cu yd	$15	16,485	$247,270
Seeding & Mulching	sq yd	$2	31,018	$62,036
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	53,907	$2,210,171
Curb and Gutter	ft	$36	19,274	$693,873
Sidewalk	sq ft	$4	48,753	$195,013
Multi-Purpose Path	ft	$30	27,596	$827,868
Drainage				
Drainage for curbed pavement	ft	$200	10,340	$2,068,024
Underdrains	ft	$9	17,138	$154,244
Demolition (includes asbestos mitigation)				
Commercial Buildings	sf	$13	13,811	$179,543
Residential	each	$12,000	47	$564,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	562	$168,517
Intersection Enhancements	each	$30,000	2	$60,000
Lighting				
Roadway Lighting	ft	$35	6,512	$227,905
Pedestrian-scale Lighting	ft	$85	9,195	$781,538
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	2	$350,000
Signage	mile	$250,000	1.23	$308,313
Pavement Markings	mile	$2,000	4.98	$9,960
Structures				
New Bridge	lump			$42,935,700
Bridge Removal	lump			$0
Reinforced Concrete Retaining Wall	sq ft	$100	47,455	$4,745,453
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump	$430,050		$430,050
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$1,150,000
Misc. Additional Costs (80/20 Rule)				$14,820,957
Summary of Probable Total Construction Costs 2010				$73,620,933
Preliminary Development Phase/Final Development Phase (12%)				$8,834,512
Contract Administration & Inspection (5%)				$3,681,047
Right of Way Acquisition	lump			$3,345,000
Relocation Assistance	lump			$3,772,400
Contingencies (20%)				$14,724,187
Summary of Probable Total Project Costs 2010				**$107,978,078**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate C - Central Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	14,272	$114,176
Sidewalk Removed	sf	$3	41,696	$125,088
Curb Removed	ft	$2	10,424	$20,848
Drainage Removed	ft	$12	5,212	$62,544
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	9.68	$220,658
Clearing & Grubbing	acre	$2,200	180.49	$397,088
Topsoil	cu yd	$15	17,296	$259,433
Seeding & Mulching	sq yd	$2	41,712	$83,424
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	56,217	$2,304,914
Curb and Gutter	ft	$36	30,923	$1,113,244
Sidewalk	sq ft	$4	48,785	$195,141
Multi-Purpose Path	ft	$30	73,309	$2,199,258
Drainage				
Drainage for curbed pavement	ft	$200	15,062	$3,012,344
Underdrains	ft	$9	31,013	$279,121
Demolition (includes asbestos mitigation)				
Commercial Buildings	sf	$13	356,345	$4,632,485
Residential	each	$12,000	11	$132,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	760	$227,926
Intersection Enhancements	each	$30,000	6	$180,000
				$0
Lighting				$0
Roadway Lighting	ft	$35	7,731	$270,580
Pedestrian-scale Lighting	ft	$85	8,131	$691,123
				$0
Utility Relocation	*Not included*			$0
				$0
Traffic Control				$0
Signalized Intersection	each	$175,000	6	
Signage	mile	$250,000	1.46	
Pavement Markings	mile	$2,000	4.22	
				$0
Structures				
New Bridge	lump			$11,694,900
Bridge Removal	lump			$111,340
Reinforced Concrete Retaining Wall	sq ft	$100		$0
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump			$0
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$12,510,000
Misc. Additional Costs (80/20 Rule)				$10,209,409
Summary of Probable Total Construction Costs 2010				$50,724,388
Preliminary Development Phase/Final Development Phase (12%)				$6,086,927
Contract Administration & Inspection (5%)				$2,536,219
Right of Way Acquisition	lump			$8,770,000
Relocation Assistance	lump			$1,147,400
Contingencies (20%)				$10,144,878
Summary of Probable Total Project Costs 2010				**$79,409,811**

Opportunity Corridor
Conceptual Alternatives - Preliminary Estimate of Probable Costs
Alternate C - East Section

Items	Unit	Unit Cost $ (2010)	Quantity	Total $
General Construction Costs				
Major Cost Drivers				
Roadway				
Pavement Removed	sq yd	$8	24,725	$197,804
Sidewalk Removed	sf	$3	84,114	$252,341
Curb Removed	ft	$2	10,716	$21,431
Drainage Removed	ft	$12	5,358	$64,293
Excavation/Embankment	lane-mile of 1 ft depth	$22,800	2.03	$46,272
Clearing & Grubbing	acre	$2,200	0.00	$0
Topsoil	cu yd	$15	223	$3,342
Seeding & Mulching	sq yd	$2	2,026	$4,051
				$0
Pavement				
Asphalt (3" 448, 9" 304, 6" Agg Base)	sq yd	$41	37,025	$1,518,023
Curb and Gutter	ft	$36	10,716	$385,760
Sidewalk	sq ft	$4	82,524	$330,098
Multi-Purpose Path	ft	$30	0	$0
Drainage				
Drainage for curbed pavement	ft	$200	5,358	$1,071,556
Underdrains	ft	$9	9,908	$89,168
Demolition (includes asbestos mitigation)				
Commercial Buildings	sf	$13	2,611	$33,943
Residential	each	$12,000	3	$36,000
Landscaping / Aesthetics				
Trees (Both tree lawns/median @ 30 ft c/c)	each	$300	53	$16,000
Intersection Enhancements	each	$30,000	4	
Lighting				
Roadway Lighting	ft	$35	5,358	$187,522
Pedestrian-scale Lighting	ft	$85	6,158	$523,411
				$0
Utility Relocation	*Not included*			
Traffic Control				
Signalized Intersection	each	$175,000	4	$700,000
Signage	mile	$250,000	1.01	$253,683
Pavement Markings	mile	$2,000	4.15	$8,307
				$0
Structures				
New Bridge	lump			$4,609,200
Bridge Removal	lump			$649,530
Reinforced Concrete Retaining Wall	sq ft	$100		$0
Miscellaneous Major Additional Costs				
RTA East 55th St Rapid Station Relocation	lump			$0
RTA Power Substation Relocation	lump			$0
Environmental Remediation	lump			$605,000
Misc. Additional Costs (80/20 Rule)				$2,901,684
Summary of Probable Total Construction Costs 2010				$13,972,552
Preliminary Development Phase/Final Development Phase (12%)				$1,676,706
Contract Administration & Inspection (5%)				$698,628
Right of Way Acquisition	lump			$2,515,000
Relocation Assistance	lump			$266,500
Contingencies (20%)				$2,794,510
Summary of Probable Total Project Costs 2010				**$21,923,896**